The Sailboat Diaries

by

Michael Fielding

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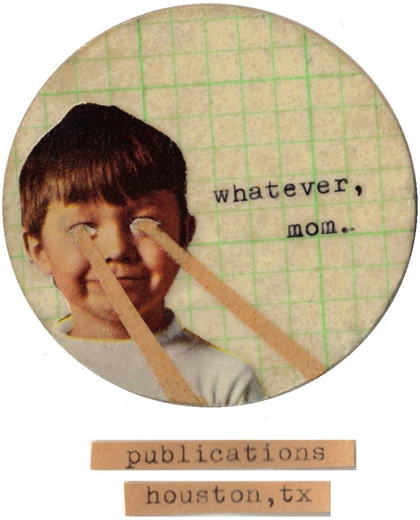

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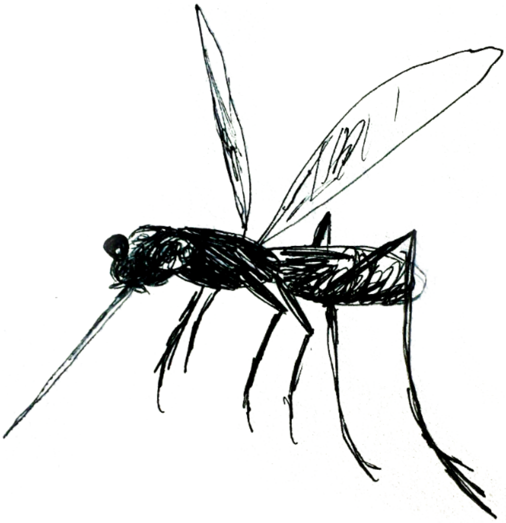

Acknowledgment

This book is a community project. It is a physical manifestation of the tangled lives of countless individuals. My narrative traces a single thread through a web of interactions, but each interaction changed the course of my journey. I'll tell you this story from my perspective, but it's not *my* story, and I couldn't have done anything without the help of friends and family.

In the spirit of this community project, I would like to offer a reward for anyone who sends in corrections. I have no doubt there will be mistakes in this 1st Edition. Tweet anything you catch @sailboatdiaries or send an email to mf@freeacad.com, and I'll send a free 2nd Edition to the first person who reports each error, and give you a shout-out in the Afterword. Thanks for your help in improving this book!

Note on QR Codes

I'm taking advantage of modern technology to mix this book with web-based multimedia using Quick Response codes, which look like this:

About QR Codes[1]

If you have a smartphone, you can use a QR Reader app to view pictures, videos, and references throughout this book. I recommend the app by Scan, Inc. which is available for free on iOS and Android. To view a link, open the QR Reader app and hold your phone so that the camera captures the QR code inside the alignment square on your screen. When the app recognizes the QR code, the square will turn green and your phone will open the link in a browser.

If you don't have a smartphone, the URLs are included as footnotes. In the PDF and ODT formats, QR codes are clickable hyperlinks. In the audiobook, I will read the footnote number for reference, and a table of links will accompany the audio files. Hopefully this book will be easily accessible regardless of your preferred reading medium.

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[1] http://www.qrcode.com/en/

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If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of every one, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation. Inventions then cannot, in nature, be a subject of property.

– Thomas Jefferson

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Chapter -1

Pre-Boat Life

I've been thinking about this book for a long time. I came up with the title back in 2011, a few months before I bought my boat. It's a play on "The Motorcycle Diaries", the story of young Che Guevara's journey around South America in the 1950's. I decided I wanted to do something similar after I graduated from college. I wanted to go on a long, open-ended voyage of discovery and write a book about my travels, filled with a mix of philosophy and adventure, so I could come back a changed man with a new perspective to share with the world. And I knew exactly where I wanted to go first.

When I was a teenager, I fell in love with the idea of colonizing an island and building a community where none had been before. I spent a lot of time scanning satellite images of the Earth, searching for the perfect spot to build a new society. I made a short list of large uninhabited islands, and eventually chose Little Inagua as my prime target.

I was enchanted by the dream of running this grand social experiment, starting from a "state of nature" and building up a population from zero to see what would happen. Unfortunately Little Inagua was already claimed by the Commonwealth of the Bahamas, but I figured after building a settlement we could declare independence from the government and form our own country.

I used the American Revolution as my framework for secession, since it was the example I was most familiar with. I made my own versions of historical documents, following the timeline of the early United States as if it were a prescription for nation formation.

I wrote a constitution, a bill of rights, and a declaration of independence. I drew flag designs, brainstormed country names and mapped out the infrastructure for this 30 square mile deserted island. I laid out a timeline from 2006 through 2025, the year I thought we would officially declare independence.

In hindsight, the plan was rather optimistic. It relied heavily on convincing a bunch of rich people to move to an uninhabited island and purchase land to fund infrastructure projects which we would physically construct ourselves.

Little Inagua – Lots for Sale [image][2]   Little Inagua – Railway Plans [image][3]

My role in the scheme was to get good grades in school, go to a good college, get a high paying job and live on the mainland for 8 years after graduating so I could save up a small fortune to personally finance a large part of the operation, while periodically traveling to the island to help with construction.

My plan also involved buying lots of weapons and training an army once we had a sizable population, because I understood clearly from the example of the American Revolution that declaring independence means declaring war, and we better be ready to defend ourselves if we want to start a new country.

2006-2009

Gather people
Make money

2010

Visit island, fly in and out, try to find fresh water
Gather people
Make money

2011

Visit island, fly in and out
Build some small adobe houses
Begin building large boat
Gather people
Make money

2012 population 10

Get a high paying job
Finish boat
Convince 10 people (with quite a bit of money) to live on island

---

[2] http://i.imgur.com/o1lZ4cw.png

[3] http://i.imgur.com/FoubC3T.png

Have them build more houses, start on main roads, tracks

Have 2-4 people (with money) continually sail, bringing supplies

Gather people

Make money

Invest money

2013 pop 30

Start on another boat

Get about 20 more people (with money) to live on island

Have them work on roads and tracks

Get a train

Have them set up underground plumbing where city will be

Gather people

Make money

2014 pop 50

Finish boat, 2 boats going back + forth, delivering supplies

Get about 20 more people to live on island

Finish roads and tracks

Have islanders install a water tower, connect to plumbing

Have them set up 30% wind turbines, 30% solar panels

Start a relationship with top guys at AT&T, some arms provider, cable TV, satellite, etc

Finish roads

Gather people

Make money

2015 pop 100

Get about 50 people

Have islanders purchase the land they want to build houses on

Set up electric grid (underground power lines)

Start building the houses

Get connected to phone network, broadband internet

Gather people

Make money

2016 pop 150

Get about 50 people

Set up sugar refinery

Build a few large docks

Start large recruiting campaign

Gather people

Make money

2017 POP 250

GET ABOUT 100 PEOPLE
BUILD RADIO ANTENNAS
BUILD MILITARY BASES
WRITE AND HAVE EVERYONE SIGN CONSTITUTION
CONTINUE RECRUITING CAMPAIGN
GATHER PEOPLE
MAKE MONEY

2018 POP 350

GET 100 PEOPLE
PURCHASE ASSAULT RIFLES, UNIFORMS
SET UP BASIC MILITARY, APPOINT PRELIMINARY OFFICERS
CUT CANAL FOR NE LAKE
RECRUITING CAMPAIGN
GET PEOPLE
MAKE MONEY

2019 POP 450

GET 100 PEOPLE
PURCHASE TRUCKS AND BASS BOATS
PREPARE A SITE FOR RADAR
BUILD NORTH + SOUTH AIRSTRIPS
RECRUITING CAMPAIGN
PEOPLE
MONEY

2020 POP 550

QUIT JOB, MOVE TO ISLAND, BUILD HOUSE
GET 100 PEOPLE
BUILD RADAR, INFRA RED DETECTOR
BUY HALF HELICOPTERS, 25% PLANES
BUY SNIPERS
RECRUIT PEOPLE

2021 POP 650

GET 100 PEOPLE
BUY OTHER HELICOPTERS, 25% MORE PLANES
BUY 4 HOWITZERS AND 8 MORTARS
RECRUIT PEOPLE

2022 POP 750

GET 150 PEOPLE

Buy other planes
Buy 4 howitzers
Buy 8 mortars
Buy 40 MGs
Make autonomous UAVs

2022 [*sic*] pop 900

Get 150 people
Buy 2 barges and 12 jetskis
Buy 100 NVGs and 1000 grenades
Start training military better
Draft declaration of independence

2023 pop 1050

Get 150 people
Perfect defenses, practice scrambling fighters
Make sure to have 3 doctors
2 dentists
3 chemical engineers
5 mechanics (aircraft and car)
4 electricians
4 plumbers
4 gunsmiths
3 tailors
4 cooks
Offer incentives to get others

2024 pop 1200

Get 150 people
Make final preparations for possible invasion
Be prepared for a bombing strike
Make final amendments to declaration of independence and constitution
Start making friends with leaders of other nations
Finish anything left before becoming a country

2025 pop +/- 1200

Declare independence on February 25
Try to get other nations to recognize us
Be prepared for an invasion
Make a film and send it to news companies around the world

While I was in high school, I started to question some of the dogmas I had been taught. I broke free of Catholicism in 2007 and posted Facebook Notes announcing the inconsistencies in Christianity. I wrote notes questioning free will and the logic of heaven and hell, and entered an email debate with my Catholic priest. I still performed obediently in class, however, and in 2008 I graduated valedictorian from Katy High School.

I decided to attend the University of Texas at Austin to study Computer Science, mainly because I knew there would be demand for that degree when I graduated, so I could get a high paying job. I wanted to follow whichever path would get me to the island soonest.

While in college, I found new perspectives. My understanding of history, ethics, purpose, society and freedom shifted. I realized I didn't want to "start a country", rather what I was seeking was a way to defend myself and my community against aggression. I still thought Little Inagua would be a great spot to build a new society, but I no longer wished to start a government there.

After my Freshman year, I got an internship with a large natural gas corporation based in Houston. I saw for the first time the depressing future I was headed towards as a computer scientist. The fluorescent lights, Euclidean surfaces, pointless meetings, political correctness, submission to authority, cubicles, dress code, commute, computer screens... Sitting still all day, feeling my soul being slowly sucked out of me; I realized immediately I didn't want anything to do with that life. I made a lot of money that summer and hardly spent a dime living with my parents. I saved it all for the island project.

It was hard to continue college after that experience. I no longer wanted any job a computer science degree would be useful for, which meant finishing college was a waste of time and money. It wasn't my money, though. My parents had saved for years to pay for my college, and invested in the "Texas Tomorrow Fund" since I was a child. When I mentioned the idea of dropping out it was like I had dropped an atom bomb.

They couldn't believe I would consider "quitting". Fieldings aren't quitters. Without a college degree I would never be successful in life. They told me I was just going through a phase. If I didn't finish now, I would never go back to school. They firmly believed they knew what was best for me.

I let their pressure sway me. I decided to stay and graduate, since it meant so much to them. My mom and dad sacrificed a lot to give me the best possible life they could provide. They worked hard when they were in school. They got good jobs, saved their money, bought a nice house in a good school district, coached my sports teams, taught class in Catholic Children Education, volunteered in my schools, read to me, taught me math and science, helped me with my projects and took me on great family vacations. They provided me with every advantage on the path towards *their* dreams. They laid their ideal life on a silver platter before me, but their ideal wasn't the same as mine.

When I was little and people asked me what I wanted to be when I grew up, I would tell them I wanted to live under a bridge and eat berries. I was never too fond of material comforts; I fantasized about living in the wild and roughing it. I wanted to be self-sufficient. I wanted to commune with nature like our ancestors did. I wanted to be the master of my own schedule, and I wanted to spend my time outside. When I was interviewed by the Katy Times after graduation, along with the other valedictorians and salutatorians from Katy ISD, I reported that my goal in life was to be retired. I think I was trying to say, “I want to be free.”

I decided to finish college as quickly as possible. I got a part time job with the University and kept saving money. I mapped out the shortest possible degree plan, which involved dropping my Turing Scholar and Dean's Scholars status in order to graduate a semester early. This was another blow for my parents, but more tolerable than quitting school entirely.

I didn’t fly to the island in 2010 to find fresh water like I had planned in 2006. I’m not sure how that was supposed to work exactly. But I kept thinking about Little Inagua, and I kept saving money.

I contemplated different ways to get to the island and ultimately settled on a sailboat so I wouldn't have to pay for fuel all the way to the Bahamas, and for the safety of redundant propulsion systems, plus I just loved the romantic notion of harnessing the power of Nature to move across the Earth's surface. I had never sailed before, so I joined the sailing club at UT and bought a few really great books about sailing.[4][5][6]

I searched the boat market and discovered some amazing deals on used sailboats. I decided to buy a boat rather than build one. I learned from my books that fiberglass is a miracle material, and older boats tend to have thicker hulls than newer models, so they last a long time without rotting. Since manufacturers continue making new boats year after year, a large supply of older boats has accumulated, making it a buyer's market. I realized I didn't need a high paying job after college to fund the first stage of this project. I could save up enough money with part time jobs to set sail after graduation to explore Little Inagua in person.

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[4] One Hand for Yourself, One for the Ship by Tristan Jones

[5] Seaworthy Offshore Sailboat by John Vigor

[6] The Essentials of Living Aboard a Boat by Mark Nicholas

I didn’t visit the island in 2011 either, or build the small adobe houses according to schedule. But I kept saving money and thinking about Little Inagua and learning about sailboats. I bought the sailboatdiaries.com domain on May 2, 2011, installed WordPress and posted my vision for the site.

What I Want to Do With This Site – *May 13, 2011*

Since you’re reading this, you might like to know what the point of this site is. My goal is to create an online dialogue where we can discuss anything and everything of interest. I’m currently fascinated by the global economic system and trying to understand how the actions of key players affect all of us. I love science and philosophy, and will attempt to use evidence and reason to support all of my positions. I encourage you to interact with myself and others with comments or video replies, and I especially welcome criticism, but please try to focus on WHY you believe something instead of WHAT you believe. Just saying I’m wrong is not enough, because you’re just as likely to be in error.

While we’re investigating the world around us, I plan on sailing through the Gulf and the Caribbean while living on a sailboat. I’m currently searching for my vessel, and will hopefully begin living aboard sometime this summer. If everything goes to plan, I’ll start adding blogs and videos to this site soon to try and get the conversation started. I’ve copied some of my previous writing from Facebook Notes where I talk about religion, government, and economics to give you an idea of how my belief system has developed. I don’t believe everything I wrote in the past (am I even the same person as my younger self? We’ll talk about that soon enough), so if you want to know my current stance on something you’ll just have to ask. So post some of your ideas, ask questions or send me links, and let’s start thinking!

Use @sailboatdiaries to tweet at me while you're reading.

The War of the Words – *Aug 3, 2010*

What does it take to control a population? Do you have to beat them into submission; use chains to prevent escape? Can you intimidate them with threats of violence into following your commands? Unfortunately the answer is far worse: you just have to use the right words.

The war for your mind is fought with words. Words that evoke strong emotional responses meant to overcome logic and reason; to prevent us from questioning or fighting back. Our rulers understand human psychology and exploit it mercilessly to control us.

Our rulers use words like 'terrorism' to make you stop thinking. 'Terrorists' don't have motives or reasons. They aren't defending themselves or their loved ones. They are imaginary evil doers who "hate us for our freedom". We must fear them and fight to eradicate them no matter how many hundreds of thousands of innocent civilians we slay in the processes. If we begin to question the legitimacy of this war on terror, they say we must "support the troops". Don't question policy or leadership, just support the troops or you're un-American. Support the troops or you will lose your friends, your in-group, and your social identity. Support them blindly while they kill the undesirables.

"If you tell a lie big enough and keep repeating it, people will eventually come to believe it. The lie can be maintained only for such time as the State can shield the people from the political, economic and/or military consequences of the lie. It thus becomes vitally important for the State to use all of its powers to repress dissent, for the truth is the mortal enemy of the lie, and thus by extension, the truth is the greatest enemy of the State."

– Joseph Goebbels

The truth is, there are no terrorists. There are only people. People with hopes, dreams, concerns and fears, just like you. If they react with violence, it is not because they hate your freedom. It is because they are scared. They're scared because a foreign military power has invaded and occupied their territory and has little concern for their well-being. Our government demands absolute submission, and unlike Americans, some people aren't going to give up their freedom without a fight.

"... the Mujahideen saw the black gang of thugs in the White House hiding the Truth, and their stupid and foolish leader, who is elected and

supported by his people, denying reality and proclaiming that we (the Mujahideen) were striking them because we were jealous of them (the Americans), whereas the reality is that we are striking them because of their evil and injustice in the whole of the Islamic World, especially in Iraq and Palestine and their occupation of [Saudi Arabia]." **– Osama Bin Laden**

But don't worry, hope! Change! Yes we can! Don't worry about specifics, just let the government spoon-feed you words with positive connotations. Then you can repeat them and feel good about yourself while you wave the flag and support the troops, knowing that you're part of the group. All while the government uses the "Patriot" Act to spy on you, read your emails and photograph you naked at airports.

Of course, they'll pay for all this through "taxes" and debt (future taxes on our children). Funny, when the mafia receives money in exchange for not acting out threats of violence, it's called extortion. When you pay the government to avoid being kidnapped and locked in a cell, they get to use a nicer word for it.

If we want to fight back, we must first fight with words. Call things what they are, not what our rulers want us to call them. The war is in the words, so choose yours wisely.

Overcoming Fear *– Jan 11, 2011*

I'm no expert, but I've been working on overcoming my own fears and I thought I'd share some of the thought processes that have helped me.

First, why should you overcome your fears? It's certainly easier to just avoid the source, but I think it hurts more in the long run. If you don't overcome your fears, you will probably be forced to encounter them over and over through your life. While you can try and minimize your exposure, that suffering adds up. I think the total negative experience you feel over a lifetime of being scared will be greater than the total negative experience you feel while overcoming them. It's like a band-aid. You can stretch out the suffering over a longer period, but you'll experience less total pain if you just rip it off.

You also have to understand what fear IS. You have to realize that your 'self' or consciousness does not come from your whole brain. It's probably a small portion of your brain (probably in the prefrontal cortex), and the rest is unconscious networks that influence your 'self'. Fear is a mechanism used by some of those unconscious circuits to influence your behavior. Do you want to let some irrational networks in your brain control your conscious self for decades to come? Similar to the way words can flow out of you without your consciousness generating them, and music or athletic performances just happen without your conscious control, fear is something generated by the unconscious that the self becomes aware of. And just like your consciousness can rewire those unconscious networks for musical or athletic performances by repeating the desired behavior over and over (think free-throws in basketball), you can rewire your fear mechanism by repeating the desired behavior over and over. It's hard work, but you CAN change the connections in your brain. You can make it so the "fear signal" is never passed to your consciousness, and the way to do it is by controlling your behavior. If you ignore the "fear signal" long enough, if you ACT as if it's not there, eventually it won't be.

When you behave like you're not scared, your brain changes the strength of the "fear signal". If you're scared of the dark, every time you walk into a dark room and refuse to turn on the light, refuse to give in to the fear, your brain reduces the strength of your fear signal. Every time you ignore the fear, the fear gets weaker. I wish there was an easier way, but you really have to face fear to overcome it. You have to consciously recognize that what you feel internally doesn't matter, it's your external actions that re-wire your brain. You can feel the most intense terror imaginable, but as long as you don't let that terror affect your behavior, if you don't let it move your muscles, your brain will begin the process of rewiring its circuits and diminishing the fear.

Another trick I've learned is using the brain's feedback loops to our advantage. Our feelings affect our facial expressions, but the process works backwards as well. If you force yourself to laugh or smile, it really does make you feel happier. If you can make yourself laugh at your fear, the fear is reduced.

"Smile! It Could Make You Happier" in Scientific American[7]

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[7] http://www.scientificamerican.com/article/smile-it-could-make-you-happier/

I'm no where close to being fearless, but I can definitely tell my efforts have reduced my fear in a lot of areas. I've tried to turn it into a game, where I'm playing against my unconscious to see who has more control over my behavior. Every time I climb something tall, touch a roach or spider or walk through a pitch black room, I win. Every time I let my fear change my behavior, I lose. The great part is: the more you win, the easier it becomes to win. When I was younger, darkness was a tough one for me. I used to bury myself under the covers and lie motionless for fear that something would get me at night. I KNEW nothing would happen, but I still let my fear control my behavior. So I started working on it. I would feel the fear, but throw off the covers and taunt the boogie man. And of course, nothing happened. Nothing grabbed me. Nothing pulled me under the bed. So the next time I felt scared, I did it again. If nothing bad happened last time, nothing bad would happen this time. Every time nothing happened, it got easier. If nothing bad happened the last 20 years, what are the chances that tonight something happens?

I've still got a ways to go. Spiders still make me a bit uneasy (I don't want to call it a fear because then it becomes a fear). Public speaking still makes me nervous. But sharing this will help. I'm not going to let that feeling change my behavior. I win.

An Evolutionary Search Algorithm – *Feb 25, 2011*

In artificial intelligence, an evolutionary algorithm is a type of optimization algorithm (a process that tries to find the best solution to a problem) that uses some mechanisms inspired by natural evolution: reproduction, mutation, recombination, and selection. Just like biological evolution, the algorithm creates a bunch of possible solutions and lets the environment decide which ones are suited for survival. The best solutions survive, grow and reproduce, mix with other possible solutions, change a little by chance, then are tested by the environment and the worst die again.

If you understand evolution, you can see how effective this type of algorithm is. Using a single self-replicating molecule as a starting point, this evolutionary search has found trillions of different patterns that are currently capable of self-replication on Earth.

The same process occurs in our brains, only the search isn't for optimal neurons but optimal neural connections. The brain searches for patterns of connecting neurons that makes the system better as whole. It does this in a distributed (bottom-up, grassroots. not top-down, hierarchical) way, allowing neurons to test potential connections and letting the most useful survive and grow.

When you look at the free market as an evolutionary algorithm, the possible solutions aren't individual people (or their genetic codes) like in biological evolution. The free market (or voluntary market) is searching for patterns of specialization and trade that fulfill people's desires.

The free market is looking for the best connections between people, the best patterns of interaction like businesses or charities to make people happy. It uses arbitrary tokens (like money or social "brownie points") to measure how much a potential pattern of specialization or trade is desired, and when that value reaches the threshold of opportunity cost the pattern is formed. Like a new neural connection forming in the brain, or a new mutation in a species, this pattern will be tested by the environment and either survive or perish.

When enough people want apples so that the market price will exceed the cost of production, a new pattern of specialization and trade will emerge: growing and selling apples. This apple growing business will probably draw on previous methods of growing apples, but it could invent some of its own or create an improvement. As long as the pattern is profitable (enough people desire it to outweigh its costs), the pattern will continue. It could grow, produce dependent patterns (like an apple transportation company), produce copies or change slightly, all guided by the desires of individuals subject to opportunity cost. If the pattern is unprofitable (not enough people want it to outweigh its costs), it will wither and die just like an unused neural connection or a bad genetic code.

If the voluntary market is an evolutionary search algorithm, we can exploit it to try to meet as many human desires as possible as efficiently as possible. To do this, we need to recognize that this distributed algorithm running on our collective brains is a lot better at allocating resources than any of us individually. People know what they want better than Ben Bernanke, and the free market will get it to them. We have to let the search run freely, uninhibited by threats of violence.

Coercion (forcing someone to act involuntarily through the use of threats or violence) is like sludge in the engine of the free market. It prevents (heavily discourages) people from testing certain patterns of specialization and trade. It’s like Alzheimer’s disease: stopping us from finding new neural connections that could benefit the system as a whole. Granted, coercion could also stop us from testing “bad” patterns of interaction, but those would fail anyway. Only the connections that society values will survive and prosper.

So if we want people to be happy, we need to stop pointing guns at them and let them test their own patterns of interacting with others. The most successful patterns of specialization and trade will survive and prosper, and humanity will start to approach the optimal network configuration. The only thing guaranteed to fail is trying to maintain the status quo with threats of violence.

Money: Dopamine of the Hive Mind – *Mar 8, 2011*

In your brain, neurotransmitters are constantly being exchanged by individual neurons in order to produce your overall experience and behavior. Dopamine in particular is involved with pleasure/reward functions, but it has many important roles in cognition, movement, attention, motivation and learning. Between the 100 billion neurons you emerge from flows this medium of exchange, a microscopic currency for nerve cells. They trade with each other thereby exchanging information, and through this economic system produce all of your thoughts and behavior. While the human brain is still far too complex to map, we can use simple organisms to form a model of how neural activity causes physical actions, and theorize about similar phenomena in ourselves.

Introduction to C. Elegans [2 min video][8]

Our human economy is remarkably similar to the networks of our brains. Like the billions of neural exchanges it takes to do something as simple as typing a word, any product of human economic activity can trace its roots through a vast network of individuals exchanging currency. Just as a single neuron couldn’t form a word by itself, no single human could make even a humble pencil on their own.

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[8] https://youtu.be/zjqLwPgLnV0

“I, Pencil,” by Leonard E. Read[9]

We are nodes in a worldwide network. We use a variety of mediums to transfer information between individuals, and through this communication network arises the knowledge, technology, and prosperity of our modern society.

Our Worldwide Network [1 min video][10]

Just as many different neurotransmitters are used to transfer information between brain cells, we humans use a variety of mediums to exchange information. Our earliest forms of communication were symbolic gestures and sounds. While imprecise and temporary, these mediums gave rise to an immense increase in human productivity. We were able to coordinate hunts and harvests, and specialization lead to an overall increase in efficiency. More communication between nodes improved the system as a whole by allowing sub-networks to focus on certain tasks.

Our next communication medium paved the way for the technological advances that grant us the unbelievable living standards we enjoy today: money. It was as if a brain evolved a new neurotransmitter that allowed the system to self-optimize. Where before information was fragile and only lasted a few hops between nodes, money was durable and capable of traveling the world unchanged. Humans recognized certain metals as functional mediums for trade very long ago, and for most of human history gold and silver were the dopamine of the masses. These metals have many qualities that are useful for a medium of exchange: they don’t corrode, they’re easy to shape, and there’s a finite supply in the Earth’s crust. The limited deposits create a natural restraint on the growth of the money supply.

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[9] http://fee.org/freeman/i-pencil/

[10] https://youtu.be/rJC7B-9ZfhE

To increase the number of gold or silver coins in circulation requires substantial energy and effort, so the amount available in an economy reflects the productive capacity of the society that uses it.

The flow of currency enabled our network to specialize to an immense degree, since the communication of desires was now possible between far more nodes in the network. Like a brain evolving into functional regions each responsible for a certain task, humans learned to take on a single trade and become experts in their field. Suddenly the entire system was better off. Humanity was smarter, more productive and more resilient than ever. The currency we exchange transfers information at the system-level that allows our societies to fulfill desires, move, learn, plan, focus attention and make decisions. Money fulfills almost the exact same role in an economy as dopamine in the brain; these systems are so analogous they even share common diseases.

Our modern economy is a brain that figured out how to manipulate its own dopamine levels. It discovered how to shoot heroin. Where physical metals like gold have previously limited currency levels in a distributed manner, paper money, debt and fractional reserve lending allow certain sub-networks to manipulate our collective money supply. The semi-conscious networks (governments and central banks) of our collective brain are injecting drugs into our system. Like the conscious networks of our brains, governments and banks try to model their system within the environment and coordinate overall behavior. Unfortunately our government and banks are working from a flawed model of reality. Even worse, they've become such fervent believers of their own lies that they can't tell their actions are unsustainable. We're neurons in the brain of a heroin addict who's convinced shooting up will cure him.

When the money supply increases, we all feel happier for a while and the economy as a whole looks better. But then it begins to wear off, the money doesn't feel as valuable and trade slows down. Less communication between nodes makes the system as a whole worse. Like neurons becoming more resistant to dopamine, after each hit it takes a bigger injection for the economy to feel as good. We're printing more and more money, taking on more and more debt, leveraging further and further and we're barely able to increase our gross production. This path is unsustainable. You cannot inject heroin to overcome your heroin addiction. You cannot take on more debt and print more money to overcome systemic imbalances due to debt and inflation.

The economy is in trouble. We have the same two choices a heroin addict faces: more drugs or withdrawal. While more painful in the short term, stopping drug use is obviously the only sustainable choice. Withdrawal isn't fun, but an economy that deleverages and stops printing money has the potential to recover. No doubt things will look bad if the government was to stop "stimulating" the economy, but that's the only way we'll ever find and correct imbalances in the system. So far the powers that be have decided to inject more drugs (Quantitative Easing), and it's unlikely they'll stop now. That means we get to look forward to the crash of overdose: hyperinflation.

Like a brain with problems due to drug use, an economy that artificially increases its money supply creates disruptions in sustainable patterns of specialization and trade. Wherever the cheap new money flows, a tumor emerges, sucking the life out of the system. Governments and banks get a straight shot of dopamine whenever they fire up the printing presses or take on debt, so these sub-networks have grown far beyond their natural limits. The unproductive nodes in these networks drain resources from the host just like cancer in the brain. As these entities inject more and more money into the system, the imbalances stretch the network to its breaking point. More people take jobs in government, finance, law or their derivatives, which don't add any value to the economy. Fewer people make economic contributions and more make withdrawals. Silly things like paying people to destroy working cars (cash for clunkers) and wasting energy turning corn into ethanol (corn subsidies/ethanol requirements) take place. The system locks productive people into cages where they turn into parasites, for transgressions as inane as possessing the wrong kind of plant material. Where the free market would instantly feel these economic losses, a government doped up with cheap money can't feel the pain. Soon the system goes into debt and starts making risky bets just to afford the next injection.

As the economy is flooded with more and more money, the medium begins to lose its value. Prices rise as it takes more units to fulfill an equal amount of desire, and people begin to lose faith in the currency. It's like neurons becoming unresponsive to dopamine, and now the flow of information that keeps the system alive is failing. The brain cells that control the lungs and heart don't trust dopamine anymore, so they stop forwarding signals when they receive the neurotransmitter. It only takes one small network to fail, like the nerve cells that control the diaphragm, for the entire system to collapse. The oxygenated blood stops flowing and the brain cells die.

Fortunately for us, economic collapse doesn't necessarily mean our deaths. Unlike neurons, humans can survive on their own or in small groups. We can quickly reconnect broken networks into more sustainable patterns and become stronger than ever. But the transition will be rough. If our rulers continue down this path, we face rising prices and falling real incomes. As people lose faith in the dollar life savings could be lost. Trade disruptions could cause massive shortages and rolling blackouts. Most of what we take for granted is in jeopardy.

But it's also an opportunity to start over. Hyperinflation would make former debts meaningless and force a lot of people to question their relationship to authority. As we rebuild from the bottom-up, we can influence the values of future societies. We can decide whether we will indirectly threaten each other through government in order to get our way, or whether we'll resolve disputes like adults. We can choose whether we'll force a one-size-fits-all teaching solution on our kids, or whether we will help guide them on their personal learning voyage. We can decide how energy is produced and what we're willing to work for. We can start believing in our communities instead of our countries and stop submitting to threats from aggressors. As the system falls apart we can build a new one: a free, distributed network of human beings.

Compulsory Education *– Apr 28, 2011*

The compulsory education we are forced to endure as children of the United States does more to damage the minds of students than to help them. Children learn far more from the manner of instruction than the explicit lessons that are taught. When you threaten children and parents with violence unless they subscribe to your education program, what you're really teaching them is that it's OK to use coercion to get your way. This implicit message of state education does more to hurt our society than any amount of knowledge students could gain through the process. We must acknowledge that we have no idea what people need to know to live their lives, and that it's inappropriate for us to force an education paradigm on anyone. The only way we can help children is to offer help and guidance; any use of coercion will only damage their developing brains. It isn't the curriculum that hurts, but how it's taught. We are taught conclusions, and forced to respect them. We are given facts to regurgitate. There are no classes on rationality or skepticism, problem solving or cognitive strategies. There was no advice on overcoming fears, facing challenges, or standing up for yourself. The primary goal was never for us to learn to think for ourselves, but to learn to be submissive.

The true lesson of compulsory education is obedience to authority, and it's drilled into our heads over and over again for 13 years. Parents and students have very little say in what their children learn. Between the bus rides we are told where to sit, what to think, what to say, even when to go to the bathroom. Laws on education vary across the US, but it's mandatory in every state. In Texas, a group of 15 people (the Board of Education) declared that

A child who is required to attend school under [Texas Education Code Section 25.085] shall attend school each school day for the entire period the program of instruction is provided.

That covers all children between 6 and 18 unless they fit a special exemption. But what does it mean for attendance to be mandatory? What actions back up the words "compulsory education"?

The state doesn't like to remind you about the gun at your back, so it hides its threats through layers and layers of obnoxiously ambiguous language. But if you look hard enough, you can always find the ultimate threat of violence:

A student who fails to attend school commits a Class C misdemeanor, which is punishable at Sanction Level One. In Texas, parents who fail to make their child go to school can be charged with "parent contributing to non-attendance," a Class C misdemeanor. The school attendance officer must warn parents in writing that their child is in violation of the school attendance law before the case is filed. Each day the child remains out of school after the warning has been given, or after the child has been ordered to attend school by the judge, may constitute a separate offense punishable by a fine of up to

$500 per day. It is a Class C misdemeanor for a parent to fail to attend a hearing after receiving notice to do so.

So both students and parents get a Class C misdemeanor, punishable by up to $500 per day, if a kid is absent too much. But what does that mean? So some men in costumes hand me a letter saying I need to give them $500… so what? I can wear a costume and hand out fines too. The only difference is how they make you pay it:

Additionally, parents may face sanctions for not attending court, including arrest and prosecution for "failure to appear." They may also face sanctions for refusing to follow the judge's orders. A peace officer or juvenile probation officer may take a truant student into custody until either the student can go to court or the parent or guardian agrees to bring the student to truancy court.

According to the Texas Code of Criminal Procedure, the state has plenty of ways to scare you into paying or directly steal the cash. They claim the right to seize your property [Art. 45.047], place you in jail [45.048], and force you into unpaid labor [45.049]. Of course, if you defend yourself from any of this legal theft or kidnapping, you will be shot and killed.

Every law is backed up by a threat of physical violence, and compulsory education is no different. The true lesson of state schools is "obey government authority", and it's one of the few things children actually remember. Our government has created an industrial recipe for Stockholm syndrome such that they can release 3 million students per year and have most of them thanking their abductors. Our rulers understand human psychology and exploit it mercilessly to maintain power. They start young, give us a nice, nurturing state representative that we can attach to, and then start giving us orders. Relying mostly on emotional stress and prescription drugs, they get the vast majority of us to color between the lines. We may not recall exactly what we learned, but we all remember doing the work that was assigned. After forcing students to act on command for over a decade, it's easy to get graduates to fill out a tax return.

So what do I suggest? It's simple: Don't support the use of coercion. Don't support people who threaten parents and children unless they agree to a certain idea of education. Don't support politicians who will use money obtained through extortion to pay teachers. If a program can't be funded voluntarily, if you can’t collect money without threatening people with violence, don’t do it. There are better options. We all want to educate children, I just believe we can do it without pointing guns at each other.

PS. I’m not criticizing teachers or parents involved with the current system. I know you all care deeply about the students and are doing your best to help them. I’m only suggesting that everyone would be better off if we didn’t use threats of violence in the education of children.

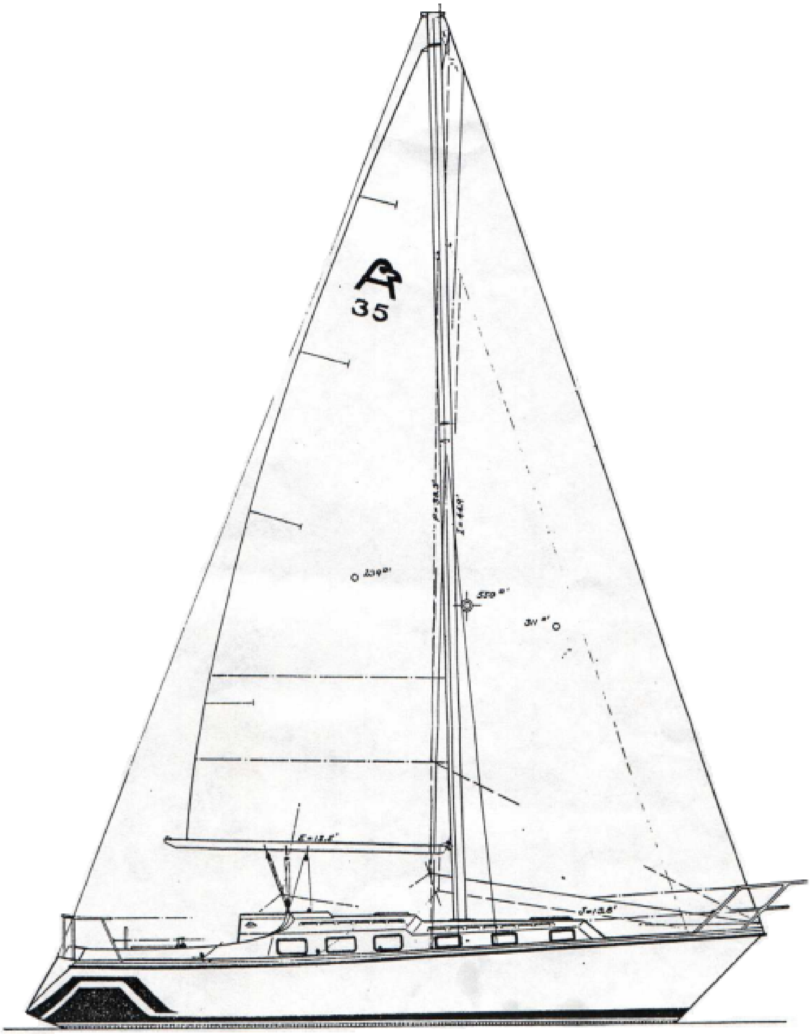
Searching for Sovereignty – *June 1, 2011*

I continued searching the market for deals on used sailboats, and by the summer of 2011, I was ready to make a purchase. I was set to graduate at the end of the Fall semester, and wanted to be able to move aboard as soon as I finished.

My parents were extremely supportive of my sailing plan. As long as I finished college, they were excited for me to pursue my dreams. And to be honest, I liked the idea of having a degree as a backup plan. I knew for sure I didn't want to use it at that moment, but I also knew I couldn't predict what I might want in the future. It wouldn’t hurt to have it in my back pocket.

My mom accompanied me on a few journeys to investigate sailboats in Clear Lake, but I couldn't find the right boat for the right price until my uncle Ray told me about a boat dealer in Dickinson that specialized in repossessions. He said the banks will sell these boats at ridiculous prices and that I should low-ball the hell out of them. They were asking $20,000 for a 35' 1983 Allmand Tri-Cabin Sloop. It was beautiful. She had a deep, heavy keel to stabilize her in heavy seas and hold her course on long distance voyages. She had two couches, a V-berth and quarter berth which meant she could sleep 5. She had a nice galley with 12V ice maker. The engine didn't run, but it turned over. I had about $12,000 to spend, so I figured if I got it cheap enough it would still be a good deal even after engine repairs.

I offered $5000, they came back with $10k and we settled on $7500. I named her Sovereignty, and just like that I was born into the world of boat ownership.


35
P=38.5'
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Chapter 0

Birth of Captain Mike

I Bought my Boat! – *Jun 14, 2011*

I finally found the right boat for me, it's a 1983 35' Allmand Tri-Cabin. I got a pretty good deal on it from a repo-reseller called American Yacht Sales in Dickinson, TX. She needs some work- bottom job, diesel repairs, prop service, new zincs, etc. but I'm excited to start fixing her up and learning all about her.

1983 Allmand 35 Spec Sheet[11]

She's currently on stands in Dickinson, but soon I will arrange for her to be trailered to a boatyard for repairs. I'll continue to fill out my Boat page with more pics and videos if you would like to follow her progress.

The Move [2 min video][12]

Sovereignty stayed in the shipyard for almost a month. I waxed the hull, got a bottom paint job, replaced the zincs, bought a new propeller, installed a WiFi antenna up the mast, replaced and rewired the masthead lights, replaced the VHF antenna, and hired out the job of fixing the diesel engine to the shipyard mechanic. While I worked on my boat and waited for the mechanic to fix the engine, I continued writing and posting ideas to sailboatdiaries.com.

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[11] http://i.imgur.com/6Gl0Rl2.png

[12] https://youtu.be/paqoW-vXvVE

Independence Day – *Jul 4, 2011*

People rarely think about the meaning of the holidays they observe. Christians celebrate Christmas without realizing it is a stolen pagan ritual, or that Jesus wasn't really born on December 25th. We all ring in the New Year without questioning why exactly the year has come to a close. If you look at a map of the Earth's orbit, there's nothing particularly special about January 1st. It's not a solstice or equinox, so why exactly do we say the year has changed? In much the same way, people raise their flags and wear red, white and blue on the Fourth of July. But few realize Independence Day has absolutely nothing to do with the United States of America.

On July 2, 1776, the Second Continental Congress voted to sever their ties with Great Britain. Two days later, the official Declaration of Independence was signed and released to the public. At this point, the colonies of North America viewed themselves as a group of independent nations. **There was no United States in 1776**. The United States wasn't formed until 1781 with the ratification of the Articles of Confederation, and this wasn't even a government as we think of it today. It was a "firm league of friendship" with provisions for mutual aid and defense, which recognized that "each state retains its sovereignty, freedom, and independence, and every power, jurisdiction, and right, which is not by this Confederation expressly delegated." The federal government of the United States of America wasn't established until 1787. For a full 11 years after the signing of the Declaration of Independence, the colonies existed as allied independent nations.

When a rebellion succeeds, it is celebrated and called a revolution. When it fails, it is condemned and called a civil war. The colonists succeeded, so we light fireworks in honor of their treason. When the South failed less than a century later, their revolt was criticized and remembered only as a dark time for our country. But the American Revolution and Civil War were fought over exactly the same issue: popular sovereignty. The only difference was the outcome. Had the South won their fight for independence, we Texans would commemorate February 23, 1861 as our Independence Day.

Had Great Britain won the "Revolution" (or Civil War as it would have been called), we would remember the Fourth of July like the Fifth of November, as a date of treachery. Instead of lighting fireworks we would be burning effigies of Benjamin Franklin and John Hancock, for daring to betray the benevolent King George the Third.

Independence Day is not a patriotic holiday. Far from it. The Fourth of July celebrates treason. It celebrates rebellion against tyranny. This holiday remembers the reasons behind a civil war aimed at overthrowing an oppressive government. The blind nationalism most people express on July 4th is antithetical to the meaning of this holiday. We should use this day to criticize and question our government, the way our ancestors did over 200 years ago. Let's use this occasion to put ourselves in colonial shoes. Would you have recognized the tyranny of English rule? Most didn't in 1776. Revolutionaries were a tiny minority. It's not easy to see the flaws in one's government, we are accustomed to viewing our country as a sort of patriarchal entity who has our best interest at heart. Would we have had the courage to say that our current government is illegitimate? If a group of individuals today told the US government that they would no longer recognize its authority or pay their taxes, would you see them differently than those who expressed the same view in 1776?

Blaming the Victim – *Jul 5, 2011*

Blaming the victim is a social phenomenon where an individual is criticized for a misfortune that befalls them. We hear the issue of blaming the victim often with rape survivors, but rarely with victims of state violence. People will callously say that someone who was raped "was asking for it" by wearing provocative clothing, or equate passing out at a party with granting consent. Similarly, when someone is arrested for drug possession, they are criticized and ostracized by law-abiding citizens for breaking the rules. People think they deserve to go to jail, and they were asking for it by owning prohibited plant material. But who is really wrong in these situations? Clearly the rape survivor didn't do anything to deserve being raped, but people are less willing to admit that the drug user was innocent when he was hauled off to jail. When someone is arrested for drug trafficking, prostitution, speeding, tax evasion or any other victimless crime, it ceases to be a victimless crime. The "guilty" becomes the victim of the state. Someone who didn't hurt anyone, who didn't destroy anyone's property, who was interacting voluntarily with others, is suddenly being hurt. Whether or not we support or engage in these victimless crimes is irrelevant. The question is whether or not it is morally permissible to use coercion against a non-coercive, non-violent, non-destructive person.

Consequences aren't indicative of morality. Being raped doesn't mean you deserved to be raped. Going to jail doesn't mean you deserved to go to jail. We have to stop blaming victims. If your friend, relative, son or daughter goes to jail for drug possession, don't get mad at them. You have to recognize that they didn't do anything wrong. They didn't hurt anybody, they didn't threaten anyone, they didn't destroy anything and they didn't steal anything. Obviously it isn't good that they went to jail, or that you had to bail them out, or that you have to spend time and money in court. But they didn't want to go to jail, be bailed out or spend time or money in court either. The state imposed those penalties on a peaceful person. It's easy to get angry when confronted with these difficult situations, but be sure you're directing your anger at the entity who's actually responsible for your troubles.

Sanity Check – *Jul 10, 2011*

When your beliefs differ radically from those around you, it's natural to question your sanity. In fact, it would be insane not to. But sanity is not a popularity contest. Holding the same beliefs as others doesn't make them any more reasonable. So how can we know if we're seeing the world clearly? If crazy people think they're sane, how can you tell if you're crazy?

"Whenever you find yourself on the side of the majority, it is time to pause and reflect." **– Mark Twain**

There is no perfect way to determine if you're right or wrong. Humans are susceptible to all kinds of cognitive biases that make it difficult to see the truth. So how can a fallible primate brain work out if it is acting rationally? You certainly can't check by comparison to other fallible primate brains, they're just as likely to be wrong. Since there is no foolproof test, we have to face the problem from the other direction. Instead of testing the beliefs that are already in our brains, we can put a filter on the information coming in to avoid creating insane beliefs. As we add new principles, some will likely conflict with our previous perspectives. We can compare those beliefs that are at odds, and keep only the most reasonable. By only adding logical beliefs, over time our brains will begin to approximate a rational world-view. We can't make a sanity checker, but we can come up with a method of forming beliefs that is more likely to produce sanity over time.

Here's how that filter can work: first, we need a purpose or goal for our beliefs. If you only want to believe things that you're comfortable with or that make you happy in the moment, then you're probably going to end up delusional. My goal is to hold beliefs that reflect reality as closely as possible. I live in reality, so I want to be able to predict and react to reality. I also believe understanding this world is the best way to figure out how to be happy in the long run. Holding "feel-good" beliefs is nice, but it won't help you interact with the universe. To keep from believing things that aren't true, you can use Occam's razor to filter out unnecessary assumptions. That is, believe the explanation that introduces the fewest new premises and most accurately describes what you know. For example, if a child loses their tooth, puts it under their pillow and finds a dollar the next morning, there are at least two explanations. One is that their parent put the money there, the other is that the tooth-fairy paid a visit. Since we know the parents exists and have money, we aren't adding any new premises to believe that explanation. To believe in the tooth fairy, however, we have to add a whole slew of new presumptions about the world that have no evidence to back them up. Occam's razor suggests we believe the simpler explanation. This method says nothing about what is true in the world, only how to avoid believing unnecessary assumptions. It's much more dangerous for humans to believe something that isn't true (type I error, false positive) than to not-believe something that is true (type II error, false negative). With the former, your cognitive biases start working to conform your perception of reality to the false belief. It's a cascading error that can produce more mistaken ideas. Not believing something that turns out true is much easier to fix, because once we find evidence that it's true we will be quick to adopt that doctrine. Our brains are constantly on pattern-seeking overdrive; we have to compensate by being skeptical.

To only create beliefs that are true, we also have to filter out our emotions. Emotions are great for lots of things, but not belief formation. They will only cloud your picture of reality and lead you to jump to conclusions. If your belief relies on how a conclusion makes you feel, throw it away. It could still be correct, but we need to start from scratch to make sure the belief is sound. We should try to believe only what an impartial observer would believe.

While emotions aren't very helpful in forming beliefs, they can be extremely effective in making quick decisions with the beliefs we already have. Our “gut reaction” is the signal we consciously receive from quick-thinking, subconscious neural networks. Our subconscious is able to sift through data much faster than we can consciously, and can produce good approximate results when we don’t have time to think things through. I’m not suggesting we ignore emotions all the time, only when creating new beliefs.

Next, we can check for consistency. Contradictions don’t exist in reality. A contradiction is an indicator that some of your beliefs are incorrect. When we become aware of a contradiction, we feel something called cognitive dissonance. While uncomfortable, this is one of the most helpful signals our brains can send us. It tells us we need to do more research, because something we believe doesn’t fit. Now the only problem is figuring out what.

When we find a contradiction, we usually find it far away from the source of the error. Think of belief-sets as branching trees, with one assumption growing, branching and twisting to produce a thousand beliefs.

Contradictions generally occurs at the edges, where leaves from different branches rub each other wrong. Only one of the leaves can exist, but we don’t know which belief is in error, or how much of the branch is wrong. We can do ourselves a great disservice by pruning too little off a branch. If you discover a contradiction, you must follow it back to the source, which can sometimes be painful. The roots of erroneous beliefs can grow deep into our sense of self. But if you don’t find the source of the problem, you will only end up drawing more wrong conclusions.

We can’t know at any one point whether the beliefs we hold are consistent with the external world. Our beliefs shape the way we perceive the universe, so it can be difficult to discover our incorrect ideas. But by critically examining incoming information and only forming beliefs when it is reasonable to do so, we can start the process of cultivating a belief-system that approximates the truth. If we recognize our fallibility and try our best to compensate for it, I think we can be comfortable in assuming our own sanity.

The Typing Test – *Jul 15, 2011*

“The unexamined life is not worth living.” When Socrates said that, he really meant it. It was at his trial, after he was found guilty of two charges: impiety against the gods of the city, and corrupting the youth. The penalty was death. Socrates had the option to suggest an alternative punishment, such as exile. He could admit his guilt, give up his questions and dialogues and keep his life. Instead, he chose death. He preferred hemlock to a life without inquiry.

Sometimes the motives behind our own actions are difficult to discern. We naturally assume we have complete control over our behavior, but there is lots of evidence that we aren't as sovereign as we would like to believe. We act, and instantly tell ourselves why we're acting. Our internal monologue fills in the blanks to give the illusion that we understand what we are doing, but a humble ego will admit its shortcomings.

Patient with Severed Corpus Callosum [10 min video][13]

Like Neo learns from the Oracle in The Matrix, we aren't here to make choices, we've already made them. We're here to try to understand WHY we made them.

It's along these lines that I've been asking myself why I write all these essays (or posts or blogs or notes, I'm still not sure what to call them). I've written too many to not understand the reason. Despite the implication of a website, these posts aren't really for you, but for me. I think my primary motivation is to put my ideas through the typing test. Thoughts floating around a brain can be fuzzy and elusive. Reasoning can seem straightforward and logical to the mind's eye, where on paper flaws become obvious. There are a lot of things I've thought I understood, until I tried to write them down. There seems to be a difference between thinking critically and reading critically. Somehow, at least for me, the latter is far more discerning. I'll write and delete something a dozen times before I'm happy with it on-screen, while all the options sound fine in my head. These essays form an extracorporeal connection between my language generator and my critical reading system, and let me give ideas a rigorous test before believing them. I think this might help me bypass some cognitive bias that makes it too easy to accept my own thoughts, and I'm happy to use any means necessary to see things clearly.

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[13] https://youtu.be/lfGwsAdS9Dc

Why I publish these things is a different question entirely. The journey to understand our world and ourselves isn't traveled alone. There are lots of us with a passion for discovery, and it would be silly not to cooperate. We can understand more together than any of us could alone. If we're trying to know the truth, then we have to be willing to have our beliefs shot down. If I'm not confident enough about an idea to let the world see it, then I shouldn't be confident enough to believe it. Someone else might see a mistake I couldn't, or maybe I can provide a perspective others haven't noticed. It would be inefficient and selfish to keep my thoughts bottled up inside, or leave them to yellow in some journal. They're not even *my* ideas. You can't own an idea; I'm just a node in their transmission network.

Fear is Funny – *Jul 18, 2011*

Fear is a funny phenomenon. For our consciousness, it can be paralyzing. It can overwhelm us. It can influence us to behave in ways we wouldn't otherwise, but for some reason it can't force that behavior directly. It's the great con game of our subconscious. The fear networks aren't directly connected to our motor controls, the only way they can affect our actions is by manipulating our consciousness. But we can use our own confidence tricks to fight back, and at least for me, laughter is the best medicine. I talked about this before in "Overcoming Fear", but it bears repeating. Fear is a signal passed from our unconscious to our consciousness. It is a set of action potentials traveling through neural networks. The neural networks in our brain have evolved to be extremely plastic, meaning the networks that connect our brain cells are constantly being reconfigured. Luckily for us, our neural networks don't change only as a result of interaction with the environment, but also due to the flow of consciousness. We can strengthen or weaken connections between neurons simply by thinking. This is powerful stuff, and gives us enormous control over ourselves if we choose to harness it.

Unfortunately it's not as easy as thinking "I'm no longer scared." Neural connections grow with repeated use, so the longer we've acted based on fear, the stronger those synapses have become. To start weakening and breaking those connections, we have to employ indirect mechanisms to re-route the flow of information. The most effective trick I've found is imagining yourself from a 3rd person's perspective and realizing how silly and irrational the fear is.

When you imagine another person's perspective, you brain literally emulates the neural connections in the other brain. We have brain cells called mirror neurons which fire both when we act, or when we see someone else act in a similar way. Scientists believe these cells play a huge role in empathy, imitation and theory of mind, and I believe we can harness these cells to rearrange our own neural networks. My intuition about the process is that our mirror neural networks act as a sort of simulator where we can test and adjust connection patterns before copying them over to our personal "operating system". To make the copy, however, requires many passes. We can't just imagine this other perspective once and copy the network, we have to train our operating system to accept this new manner of thinking. The more we practice acting based on this new point-of-view, the more natural it becomes, until it's hard-coded into our self.

The way we can exploit this to overcome fear is to imagine a fearless, rational entity and act as they would act. In a sense we're adding a middle man to our natural train of thought. Where before we might think: [it's dark → what was that noise? → I'm scared → hide under the covers], we can add some new steps: [it's dark → what was that noise? → I'm scared → **what would a fearless, rational entity think?** → **there's no evidence of anything to fear** → **there's no reason to act afraid** → don't hide beneath the blankets].

Once we start simulating this perspective, we can really start to see how funny the fear was. This overwhelming emotion hijacked our behavior because of a simple misunderstanding of reality. Our unconscious was so stupid it triggered this powerful response to an unidentified sound or shape. When you realize how irrational this is, when you see yourself from a more reasonable perspective, you can start to find some real comedic gold in your own internal monologue.

As our brain practices thinking like a fearless, rational entity, the simulation gets quicker and more accurate. For some of my older fears, the simulation runs so quickly now that it takes milliseconds between the scary sensation and the internal laughter. I was walking through my house in the dark when out of nowhere a scary image popped into my head. Before I could even process what happened I had a big smile across my face. I **knew** this thing wasn't real, and it was just so funny that my unconscious would try to make me believe it was something to be afraid of.

Overcoming fear doesn't have to be a solo endeavor. Fear is a common enemy to all of us, and cooperation will help us all more than trying to fight alone. There will be different tricks and mechanisms that work better for each of us, and I think if we share our discoveries then we'll all have more methods to try out ourselves. Maybe laughing at your fear doesn't work so well for you, but cussing at it does. Our brain responds differently to curse words, and actually reduces our pain sensations when we use them. We can exploit this to cuss out our fear.

"Why the #$%! Do We Swear? For Pain Relief" in Scientific American[14]

We can start building toolboxes full of coping strategies to use when we feel fear, and if we share these tools with others then we all have a larger selection to choose from. We can also share the irrational things we're afraid of, and just revealing these fears to the world will force us to reflect on how silly they are. I've still got some issues with spiders and roaches that I'm working on, and having to say that is pretty embarrassing. I **know** they can't hurt me (at least the non-venomous ones), but some silly neural network is telling me that they're gross and scary. But I'll keep practicing and I know eventually it'll give me something to laugh at.

Purchasing Power – *Jul 21, 2011*

It can be really hard to see how we're getting screwed by the Federal Reserve System. This is intentional. We're so accustomed to measuring value in Federal Reserve Notes denominated in dollars that we forget what exactly this piece of paper symbolizes. It actually represents a note of debt, money the Federal Reserve owes you. When the Federal Reserve was first created, Federal Reserve Notes could "be redeemed in lawful money on demand at the Treasury Department of the United States, in the city of Washington, District of Columbia, or at any Federal Reserve bank".

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[14] http://www.scientificamerican.com/article/why-do-we-swear/

Federal Reserve Act Section 16. Note Issues[15]

Originally this “lawful money” meant gold or silver, but then the Government came up with an ingenious plan. They made the Federal Reserve Notes, the IOU’s from the Federal Reserve which entitle you to “lawful money”, into “lawful money”. Now they could pay back the debt with the debt! No restrictions on spending, now the Government has free money! Charles Ponzi would be so proud. Of course, there is no free lunch. You can’t create value out of a printer. The only thing printing money can do is steal value from those who hold the currency (or anything measured in that currency). If you double the amount of tender in existence, then each note is worth half as much. Ah, but wouldn’t everyone have twice as much currency? If this was the situation, then the only change would be the nominal prices and wages, so no one would lose value. But this isn’t the case. The new money isn’t distributed evenly, it’s given to the Government and the Federal Reserve Banks. We don’t see the transfer, but wealth is being sucked out of our pockets. Whenever money is created, we end up with a slightly smaller piece of the pie, while the Government and banks get slightly more.

Since it’s so hard to think of currency as anything but a consistent unit to measure prices with, I’m going to try to switch this metric to something a little more concrete so it’s easier to see how a declining dollar hurts us all. Bear with me because this analogy gets a little tenuous at times, but I think it can shed some light on how we’re being cheated. Let’s imagine Bob has a serious ice cream fetish. Every day when Bob hears the music, he walks from his house to meet the ice cream truck down the street. One day, Bob decides to try to calculate how far he walks to buy the ice cream. In a sense, he is trying to discover how much the ice cream is worth to him – how far he is willing to walk to get the ice cream. Unfortunately for Bob, the culture he lives in doesn’t use a fixed system for measuring distance. The standard unit is the “meddler”, and it’s length is set by the Meddling Reserve. The Meddling Reserve is required by law to maintain length stability, yet despite this the meddler is constantly being shortened.

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[15] http://www.federalreserve.gov/aboutthefed/section16.htm

Bob measures his trip, and is appalled to discover he now walks over 20 meddlers to retrieve his precious ice cream. Just a year ago, it was only 15 meddlers to meet the truck. How could this be? The ice cream didn't taste any better, and the truck didn't seem any harder to get to. Bob was perplexed. Why should he have to walk 5 meddlers farther to get the same ice cream?

Now let's take a larger leap and imagine citizens in Bob's country are paid in meddlers, and their supply of meddlers dictates how far they are allowed to walk. They each have a pedomeddler ankle-bracelet that won't allow them to overstep their allotment of meddlers. Bob has a pretty good job, and gets 2000 meddlers per week. But over the past few years, Bob has caught on to a disturbing trend: despite his yearly salary increases, it's getting harder for him to run his errands. Where before he could meander aimlessly while relaxing or doing chores, now he has to plan his route precisely to make sure he can get home. He's making more meddlers than ever before, but all of the things he needs seem farther and farther away.

Bob decides to do something about his problem. Although the meddler is by far the most commonly used unit in Bob's country, there are others that don't seem to react in quite the same way to the Meddling Reserve's meddling. One archaic unit in particular, the meter, appears to have been quite stable throughout human history. The meter, it turns out, is fixed to a property of the Earth, so no single entity can control its length. Bob comes up with an ingenious plan to preserve his walking power: after he is paid, he converts all of his meddlers to meters for safe keeping, and trades them back for meddlers before he walks to the store. To Bob's amazement, with this simple maneuver he is able to keep up with the rising distances. Since the meddler is constantly being shortened, by the time Bob trades his meters back he has considerably more meddlers than he was originally allotted.

"Why then," Bob wondered, "would the Meddling Reserve issue meddlers when the meter is much more effective for measuring and comparing distances?" At first, it seemed like some arbitrary tradition. Bob's friends and family told him they use meddlers because they had always used meddlers. When Bob pointed out the shortening of the unit, they told him it was always getting shorter, but they were always paid more to compensate.

This didn’t quite satisfy Bob. “Where are these new meddlers coming from?” he wondered, “And where are they going?”

After some research into the inner workings of the Meddling Reserve, Bob found some disheartening answers. The meddler, the unit he grew up using to measure distances, is based on absolutely nothing. The Meddling Reserve controls its length by giving away meddlers created out of thin air. The more meddlers in use, the shorter the meddler. The new meddlers are used to finance Bob’s government, which uses tons of meddlers going nowhere. They hand them off to Government employees so they can essentially walk in circles.

But why would they do that? Why would they constantly give away new meddlers? It turns out the system is structured so that they *have* to constantly increase the number of meddlers in existence. You see, the Meddling Reserve doesn’t just *give* meddlers to the Government, they *loan* them meddlers. The Government has to pay them back with interest. And since the Meddling Reserve is the only source of currency, the Government can only get enough units to payback their loan with interest by borrowing more. New loans are required to pay old debts. And the only way they can pay back the debts on these new loans is by taking on even more debt.

We live in a system that is **designed** to constantly decrease our purchasing power.

Maiden Voyage – *Jul 25, 2011*

I finally got the call that my engine was fixed and it was time to step the mast and motor Sovereignty over to my marina. Excitedly, I drove two hours to Clear Lake with my mom only to discover she still didn't run, so we turned around and drove home. When the 30 horsepower diesel was finally fixed, my friend Nick rode with my mom and me to help me pull into a slip for the first time. They used a huge lift to pick my boat up off the stands and set her gently into the water, and we watched the bilge to make sure she didn’t leak. They used a crane to step my mast and I prepared to drive this 16,000 pound boat for the first time. As I backed out of the slip, the shifter broke when I transitioned from reverse to neutral to forward. The deckhands had to throw me a rope to pull my sailboat back in. The mechanic removed the broken shifter part and told me it would be almost impossible to find a replacement, but he pointed me in the direction of a welder who could fix it.

Maiden Voyage [2 min video][16]

The next try went a lot smoother. My brother drove me down to the shipyard to help me move Sovereignty. The plan was for Grant to drive around to Marina del Sol in his car as I motored there across Clear Lake, so that he could help me pull into the slip for the first time. As I was motoring away from the dock I remembered his car keys were still in my pocket and I had to throw them over water to Grant on the dock, but we nailed that exchange and didn't have any problems getting into the marina. After moving Sovereignty to her new home, I continued to fix her up and write blog posts for sailboatdiaries.com until I went back to college in the Fall.

The Argument from Ignorance – *Aug 2, 2011*

If we want to hold beliefs that are consistent with reality, we have to understand logical fallacies and cognitive biases. Understanding logical fallacies is what enables us to argue rationally, both with ourselves and with others. Knowing our cognitive biases grants us the ability to compensate and correct for their effects. Without a deep understanding of how our thinking is inherently flawed, we are unable to see the world clearly. The argument from ignorance is an astonishingly common line of reasoning. It goes like this: “Something happened that I don’t understand, therefore X.” The premise states ignorance on a subject, and the conclusion states knowledge on the same subject. There is a clear contradiction that prevents this argument from being logical. I’m sure this all seems obvious, but you’d be surprised how often this argument is used, especially in our internal monologues.

Being scared of an unidentified noise or image is only possible with an internal argument from ignorance. The premise: “I can’t identify that sound or shape” completely rejects the conclusion: “It’s a ghost”. Even if you believe ghosts exists (which, let me assure you, they don’t), you don’t have enough evidence to support the conclusion that the sound you heard was a ghost. Of course you can understand this and still be scared, but with practice you can internalize the logic and overcome your fear.

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[16] https://youtu.be/uHNT60zec08

There are a couple of aspects to this fallacy that make it especially treacherous. It removes a great filter from our belief-formation process: the requirement for sufficient evidence. The argument from ignorance relies on a claim that has no evidence to support it, but also no evidence to disprove it (thus the name "argument from ignorance"). The absence of counter-evidence is cited as a reason to believe the claim, but there is a whole set of possible beliefs that have no evidence to disprove them, and it's highly unlikely that all of them are true. It's possible that a tiny teapot is orbiting the sun between the orbits of Earth and Mars, and there is no evidence to disprove this. But we'd be fools to believe it's there. A lack of refuting evidence is not a good enough reason to believe something.

Mistakes with this fallacy only go in a certain direction, leading people to believe things that aren't actually true (giving false positives, like believing ghosts exist when they really don't). Unfortunately this is the most dangerous direction to make a mistake in. Our cognitive biases are stronger on the false-positive heading, so you can easily become trapped by a belief since it's self-reinforcing and unfalsifiable, even if the belief turns out wrong. The argument from ignorance provides an on-ramp to a roundabout of circular reasoning that prevents you from seeing the truth.

The Discontinuity of Self – *Aug 10, 2011*

Our personalities are constantly evolving, yet people are generally troubled by the idea that the continuity of self is an illusion. Humans around the world instinctively cling to the idea of immortal souls, insisting that while our features may change, the *being* remains the same. After all, we **know** we have a self. Nothing could be more convincing than our personal thoughts and experience. And it sure seems like it's the same today as it was yesterday. But while it may be disquieting for some, all evidence and reason points to a discontinuous self: an identity that emerges anew every instant of every day. And far from being scary or depressing, understanding our fragmented nature can give us the tools to live a happier life. We can forgive our former selves, learn to live in the moment, and leave distant worries to our body's later inhabitants.

How can we even recognize if the self is continuous or not? We can't rely on our subjective experience, because we are subject to all sorts of cognitive biases that lead us to believe things that aren't true. We're all familiar with optical illusions, magic tricks, ventriloquist acts, and other common errors our brains make in perception. These are all instances where the way we perceive something leads us to form a belief that isn't true, and we often enjoy believing the lie. Is it so hard to believe we could make a similar mistake while perceiving our **selves**? Since my argument is that the continuity of self is an illusion, you can't argue against it by saying your self *seems* continuous. That's like arguing with a magician over where his rabbit came from. He tells you it was an illusion, and you tell him there must have been a rabbit in his hat since it appeared to come out of it. We have to ignore what *appears* to be and use evidence and reason to figure out what's really going on.

Since we're stuck using only evidence from outside subjective experience, we have to come up with some objective way of telling whether the self is continuous or not. So we have to figure out some way of recognizing whether a person's self has changed, or remained unchanged, that relies only on external actions and not internal thoughts or feelings. To do that, we have to be able to tell if two selves are the same or not. If your self from yesterday is the same as your self today, then it hasn't changed and the self is continuous. If not, it's discontinuous. We can do this using a thought experiment I made up that tests for identical selves. The Self-Identity-Test is a series of questions or situations posed to a person, and they respond with answers or actions. We could come up with all sorts of questions, like "What's your favorite food?" or "Where was your mother born?", or situations like walking past a beggar and seeing if they donate a dollar. The idea is that people with different identities will respond differently, and the same person taking the test twice will respond the same way. We can go further and say that two selves are identical if and only if they respond exactly the same to the test, and two selves are distinct if they answer with at least one difference. So in essence, I'm defining the self using the way the self responds outwardly to different scenarios. I'm not saying the self **is** all of those responses, but I'm saying that an unchanged self would answer the same way every time.

It's easiest to recognize the discontinuity at large time-steps. Clearly you're not the same person who lived in your body a decade ago. How could you be? You've got a decade of experience your younger self didn't have. You have different values, beliefs, mannerisms and goals. You think differently, and you act differently. So what makes us think our *being* is the same? At first glance, it seems like we have the same bodies. But most of the cells that lived in your body 10 years ago have long since died, and your appearance has changed significantly. We have the same DNA, but not even the DNA is expressed in the same manner. We share some memories, but we have far more that differ. If we gave you, and the 10-year-younger version of you the Self-Identity-Test, there's no way you would respond identically to every possible question.

Recognizing the discontinuity gets a little trickier at shorter time scales. Are you the same person as yesterday? Well, if *anything* happened to you yesterday, then there will be some question in the Self-Identity-Test that you would respond different to. Like the question "What did you do yesterday?" As we whittle down to shorter times, the test starts to reveal fewer and fewer differences. But the differences are still there, and the fact that they add up over longer intervals proves that changes are occurring at the shortest ones.

We're so accustomed to our personal point-of-view that we grow to believe it is constant. But the self is a lens through which we see the universe, and it is perpetually shifting. It only seems constant because the change is generally so gradual. Once we let go of the illusion of continuity and focus on the changes, we can start to see how our selves emerge from underlying processes.

Our identities are constructed by a vast collection of neural networks all working simultaneously. The way we act, the choices we make, the beliefs we form, are the high-level, external projections of a complex system of neural interaction. We're like the operating system of a highly parallel computer. **We** are **formed** by the physical operations of our internal hardware. An operating system is an abstraction that emerges from operations on single bits, and the self is an abstraction that emerges from the operations of individual neurons. We can think of our outward behavior and actions as the image that appears on the computer monitor, a way for the system to interact with the outside world. What shows up on the screen is the result of a coordinated effort by the CPU, RAM, motherboard, OS and hard drive. The image on the monitor can change gradually, giving the illusion of continuity within the system. But at least 60 times a second, each individual pixel is refreshed based on the calculations performed within the machine. It may appear as one congruent form, but that is simply an illusion. Our behaviors, beliefs, and being emerge anew based on the current pattern of neural communication in our heads. Any semblance of continuity is merely an illusion.

This isn't just some semantic debate about the word 'self'. The implications for the way we live are enormous. Understanding that we aren't the same person as before relieves us of our guilt. It wasn't *you* that made those mistakes. It was your younger self, someone without all the knowledge and experience you have today. (Most importantly, the younger version is missing the knowledge of how that mistake played out.) Who's to say how *you* (the you in your body *right now*) would have handled that situation if *you* were there? The **only** thing we can do is learn from those memories. We can't change the past, and there's no point feeling bad about things we can't change. Granted, this perspective isn't natural and it can be hard to achieve. But it *is* rational, and with practice we can learn to let go. Like overcoming fear, we have to simulate our desired reactions before we can integrate them into our selves. When my mind starts dwelling on a mistake, I tell myself that I can't change it, I can only learn from it. When you realize *that's the very best you can do at this point*, it actually feels good to recognize the error and move on. You're now a better person because of it, and the self that made the mistake is long gone.

Recognizing that we only exist right now can also be extremely liberating. Focusing exclusively on experiencing the moment can bring about enjoyable and enlightening mental states. Many forms of meditation involve the practitioner trying to become aware solely of their immediate perceptions, allowing thoughts, memories, feelings, and sometimes the entire sense of self, to wash past them. Experiences like that can give us great insight into what we really are, a brief peak beyond the illusion. We can learn a lot from Buddha on the subject, but of course, "believe nothing, no matter where you read it, or who said it, no matter if I have said it, unless it agrees with your own reason and your own common sense."

Most helpful of all, recognizing our discontinuous selves can help us shed our fear of death. *You* will never die. The person in your body right now has no reason to fear death. Some other poor sap wearing your shoes in the future will get to experience that. And since you can't do anything about it now, there's no point worrying about it. Worrying about death before it's happening is the only way to make sure it has a worse effect on your life. Let's say it's gonna take you an hour to die someday. Maybe you'll get bitten by a snake or something. Over the course of your life, you can either experience that one miserable hour associated with death, or you can spend years fretting about it and still have to add that one shitty hour at the end. We might as well minimize the negative effect death is going to have on our lives by worrying about it as little as possible, since *we* don't have to die anyway. We can leave our body's later inhabitants to deal with the bitter end.

The same goes for anything that will happen in the future that we can't do anything about right now. (Of course, there are lots of things where doing something today will put our future selves in a better position, I'm only talking about situations where we can't affect what will happen.) After a certain amount of preparation, you can't change how you're going to respond in a job interview. You might as well leave your future self to deal with it. After enough studying, you can't do much to affect your performance on a test. Leave the worrying for the person who takes it. Anything we're dreading is really a chore for a later version of you, so there's no point feeling bad about it now. Your future self is going to have to deal with it regardless, don't let it burden your current self as well.

Abstractions and Reality – *Aug 28, 2011*

An abstraction is a way of simplifying reality to make it easier to understand and work with. This idea is used all the time in computer science: it allows you to build a very complex structure without having to think about every detail at once. It's a way of building ideas in layers, like using physical transistors to make binary logic gates, and combining logic gates to perform arithmetic computations. We use abstractions to draw a box around something and treat it as one *thing*, then use that idea as a building block for more complex concepts. At the highest levels of abstraction, we work with ideas that ignore many of the nuances of the physical world.

We also deal with abstractions in our everyday life, although often without realizing it. People will point at a white shape in the sky and call it a cloud. But the cloud has no definite edges; there's no point where it goes from being a cloud to not-a-cloud. We humans are drawing an imaginary circle around a group of water molecules and calling it a single entity when in reality no entity exists. There are no clouds in the physical world, that is an abstraction that exists only within our minds. In reality there are only water droplets that happen to be floating near each other. (And there aren't really water molecules either, just groups of subatomic particles that we call water.)

The ability to use abstraction has huge benefits, and it's likely what allowed us to emerge as the smartest species on Earth. It enables us to learn about patterns instead of specific instances, which lets us apply our knowledge to new situations. Abstractions give us the ability to see the forest for the trees, to see how things work in a broad sense without getting bogged down in the details.

But, of course, no tool comes without its potential for misuse. Sometimes we get so caught up with aggregates that we forget to consider the individual. The most dangerous example is the word 'we'. I hear it all the time: "It's terrible how poor people can't get medical insurance, **we** have to do something about that." "**We** should provide free education for everyone." "**We** can't allow this kind of thing to happen!" Rarely do you hear "**I'm** going to do something about that." Or "**I** don't condone that sort of behavior." It's always something that must be done by the collective.

The reason 'we' is so tempting is because it allows individuals to abstract away the particulars of their proposed policy. They don't have to consider how the program will be funded, or how they will enforce such a regulation. They don't have to think about the coercion necessary to bring about such collective action. When you use the word 'we', you keep the good-feelings of having suggested action without feeling the personal guilt of sticking a gun in someone's face in order to pay for that action. The threats are buried deep in the lower levels of the abstraction, while the benefits sit right at the surface.

Of course, there are plenty of times where it's useful to think of groups of people as a group. In reality there are only individuals, but we can gain insight into the nature of the world by placing people into categories. But we have to remember that those categories don't really exist. They only exist in our minds. And any action taken by a collective is really taken by individuals. You can't support the use of coercion by a group of people unless you support coercion being used by individuals. If you want to fund something with money taken under threat of violence, you must support individuals using violence against people who refuse. And if you're not willing to take that responsibility personally, if you're not willing to point a gun at your neighbor's head and say "pay up or die", I don't see how you can feel morally justified voting for someone to hire someone else to use violence against those who disagree. Adding layers of abstraction doesn't absolve you of the moral responsibility for the actions you support.

Entropy, Free Lunches and Coercion – *Sep 2, 2011*

Entropy is generally a poorly understood concept, especially because it means something very specific and technical in Physics and Chemistry. But at the high-level, it's really not that complicated. Entropy can be thought of as "disorder" or "chaos", and universal entropy always increases (2nd Law of Thermodynamics). That means the universe is always moving from a more-ordered to a less-ordered state. But everything we see looks so ordered; look at the complexity of DNA, plants, animals, society, technology, stars, ice crystals and galaxies. If universal entropy is always increasing, shouldn't the universe be a sea of random, disordered matter? How can there be these complex, ordered structures?

"As entropy increases, the universe, and all closed systems in the universe, tend naturally to deteriorate and lose their distinctiveness, to move from the least to the most probable state, from a state of organization and differentiation in which distinctions and forms exist, to a state of chaos and sameness. In Gibbs' universe order is least probable, chaos most probable. But while the universe as a whole, tends to run down, there are local enclaves of whose direction seems opposed to that of the universe at large and in which there is a limited and temporary tendency for organization to increase. Life finds its home in these enclaves." **-Norbert Wiener**

"The Last Question" read by the author Isaac Asimov[17]

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[17] https://youtu.be/R3U30wSAV4Q

The key is that you can decrease entropy for "local" systems, as long as you compensate by increasing the entropy of the surrounding environment. And you have to increase the entropy of the environment *more* than you decrease the entropy of your local system so that universal entropy is still increasing. You can cool the air in your house using your AC (decreasing the entropy in your house), but only if you add *more* heat than you removed to the environment outside your house. The main point here is that you can't decrease entropy without increasing it somewhere else. Anytime you intervene in nature, you're making the overall system less efficient. There is no free lunch, you can't get something for nothing.

Nothing is ever free; there is no such thing as "free education" or "free healthcare". Every product and service that has ever existed has been paid for by somebody. If you want to decrease the cost of something for a certain population, you **must** increase the costs outside of that population. And you must increase the cost *more* than you decreased the costs in that smaller population. If you want to subsidize the cost of education for certain people, you **must** take more than an equivalent amount of wealth from other people. The net-cost must always be greater than it would have been if those people paid for their own education directly, because of the inefficiencies added by the intervention (the cost of bureaucracy, administration, overhead, etc). And I don't mean some organization or government has to pay more, because those don't exist in reality. Individuals pay for everything. Even if *you* aren't paying for it, someone is. (In all likelihood, you *are* paying for it, you just don't see how the wealth is being taken from you, like through the loss of your purchasing power).

Once you accept that you can't get something for nothing, it's easy to see how coercion can never have a net-positive benefit to society. The Free Market is an evolutionary search algorithm that looks for the best solutions to people's problems. It is constantly evolving to meet the needs of society. Where the evolutionary search of Life looks for patterns of nucleotides that are capable of self-replication, the Free Market looks for patterns of specialization and trade that are self-sustaining. It's a way of feeling around for those little pockets of lower entropy, those special ways humans can interact that have a net-benefit to society (increasing the overall system's order and complexity). The only way a business can survive is if enough people desire it to offset its costs, if it has a net-benefit to the system. The free market lets everyone try to make every possible good or service they can think of, and only allows the net-beneficial (aka profitable) solutions to remain. It's a trial-and-error process of making people happy, perfectly analogous to the evolutionary search of Life.

The state, on the other hand, picks one solution and enforces it with violence, heavily discouraging people from searching for better solutions. This intervention **must** be less efficient (and less beneficial) than the voluntary market, because of the 2nd Law of Thermodynamics. You can't interfere with nature without making some system less efficient. You can't just "know" the best solutions to social problems and use weapons to make them happen. That's like asking a group of people to write the genetic code for a new animal by hand and expecting it to thrive in nature. Worse even, it's a group of primates voting for a subset of their population to write the DNA sequence by hand, then letting them hire other primates to kill every other life-form in their creation's niche to prevent competition. Sustainable patterns of specialization and trade are hard, complex things to figure out, just like self-replicating patterns of nucleotides. We have to test out as many possibilities as we can and let the best ones survive, prosper, breed and reproduce. It's the greatest proven method of finding those "local enclaves" of decreasing entropy. Coercion is trying to take a shortcut in that process. It's trying to guess a self-replicating DNA sequence. It's trying to get a free lunch; trying to pull order and complexity from thin air. But you can't get something for nothing, interfering with the evolutionary search of the free market **will always** make the system less efficient: less ordered, less complex, and less able to fulfill our wants and needs.

Patterns of Matter – *Sep 17, 2011*

Nothing is clean. Nothing is new. Everything is composed of subatomic particles that are nearly 14 billions years old. Your new car? Every single piece of it forged in a supernova, then flung into space to be recycled by our star system. That matter was pulled together by gravity, with 99.86% winding up in a single clump that got so heavy it fused Hydrogen and lit up. 99% of the remaining matter condensed into the 4 gas giants. All the matter of our local gravity well (Earth) came from just 0.0000001% of the original cloud that birthed our solar system. A negligible fraction of matter that didn't get pulled into the sun or the giants, settled into orbit about 93 million miles from the system's center of mass, showered with energy and given 4.5 billion years, produced us.

Objectively, all matter is the same. There's no difference between a neutron in a carbon atom in the dendrite of a neuron in your brain, and a neutron in an iron atom in Jupiter's core. Everything's made of the same essential ingredients; the patterns are the only distinguishing feature.

Most patterns of matter are boring. As you would imagine, a random arrangement of subatomic particles is more probable than and ordered arrangement (2nd law of thermodynamics). If you toss atoms in the air, they'll most likely fall into a function-less pattern. But given the right circumstances and enough time, you might just get a pattern capable of self-replication. That's what happened here: some pattern of atoms, some ordered collection of matter fell into place such that it could copy its own pattern into the random matter around it. A simple identity function: matter that could "compute" itself. A tiny molecular machine whose only function was to assemble a copy of itself.

Now what happens when you've got a pattern of matter that can self-replicate? Well, you end up with a ton of that pattern. Every instance of that pattern will copy itself as long as it's able, so the number of instances of that pattern grow exponentially. Since a random arrangement is always more probable than an ordered arrangement, since an imperfect copy is more probable than a perfect copy, naturally some of these patterns will be slightly different. In the vast majority of cases, changing the pattern makes the new copy "worse"- less able to self-replicate. But every now and then, the change improves the pattern's ability to self-replicate. These new patterns make more copies than the old version, introducing more random variation, which are again selected by their ability to self-replicate.

In every iteration of the matter self-replicating, the pattern gets a little more complex. The ability to self-replicate grants matter the ability to fight the 2nd law, at least locally. Every version of the pattern is better able to self-replicate than the last, simply because the versions most able to self-replicate keep replicating, and the versions that aren't, don't. The patterns get longer and longer, more and more complex. Soon, the patterns code for the production of material devices that store information about their surroundings, and use this information to improve their ability to self-replicate. A brain is born.

From there, in the blink-of-an-eye matter begins to store information about its own internal state. A feedback loop in the brain that allows self-awareness: consciousness is born, and with it, a huge improvement in the ability of the pattern to self-replicate.

We are patterns of matter. We are not the matter that constitutes the pattern, we are the pattern.

The Biological Evolutionary Search – *Sep 17, 2011*

Supposedly the hardest question you can ask is “What is the meaning of Life?”. As if there was one. It’s hard because the question asks for an answer that doesn’t exist. Like “What is the meaning of plate tectonics?” or “What is the meaning of fusion?”. How can a phenomenon *mean* something? Words can mean something, paintings can mean something, facial expressions can mean something, because these are symbols created in order to convey a message. But Life isn’t a symbol, it’s a process. It’s an ongoing event. Like a river digging a canyon, or a star progressing through it’s life cycle. Life is simply the self-replication of certain patterns of matter. Somehow, atoms arranged in a certain pattern are able to copy their own pattern into other matter. The interesting questions don’t concern its meaning, but how this process got started, how it works, what are its effects, why is life on Earth the way it is, what conditions are required for it to work. In other words, the questions with answers.

Like the Free Market, Life is best understood as an evolutionary search algorithm. An evolutionary search algorithm is a process that attempts to find optimal solutions to a problem, in this case: self-replication. In reality, there is no “goal” to Life. There is no meaning. It’s just matter interacting. But for us humans, it’s easiest to imagine Life as a search for patterns of matter that are capable of self-replication. A highly-parallel, planet-wide search for the arrangements of atoms that are best at reproducing their own arrangement of atoms.

When we think about evolution, people tend to think about the physical appearance of plants and animals changing over time. But the way a species looks is just a physical manifestation of their DNA. The DNA is the real pattern of matter that matters. Not the body, not the shell; the DNA is the self-replicating pattern.

Life searches for possible self-replicating arrangements by creating a bunch of possible solutions, and letting the environment kill off the ones that don't work. Patterns of matter that don't replicate, don't replicate. These are dead-ends in the evolutionary search. The best solutions survive, grow, reproduce, mix with other solutions, change a little by chance, are re-tested by the environment and the worst die again. Over time, patterns become highly optimized for their environment. Species adapt and "learn" to fill niches.

Using a single self-replicating molecule as a starting point, this evolutionary search has found roughly 10 million different patterns that are currently capable of self-replication on Earth. 10 million arrangements of atoms that are able to re-construct their own arrangement using the atoms around them.

The "Real World" – *Sep 27, 2011*

I can't count how many times I've heard that school and college were preparing me for "the real world". Supposedly *this* is just a training simulation, a game to learn how "the real world" works. But what I'm learning doesn't seem very real. I've learned how to arrange symbols in a pattern that receives a high score. A score determined by the subjective preferences of another human (even on an objective test, i.e. multiple choice, someone chose the questions). How is that "real"? I've learned to submit to the authority, to conform, to follow arbitrary rules. How is any of that "real"? Reality is the physical substrate of our universe. Reality is particles: neutrinos, quarks, muons, etc. There are no categories or concepts in the real world, the world of physics. There are no opinions, no jobs, no economies, no companies, no tests, no rules and no money. There aren't even trees in the real world. A tree is a concept humans created to categorize a particular pattern of matter. In reality, there are no trees. Of course, the stuff we call trees exist in reality, but not as a single *thing*. There's no objective reason to draw a circle around a certain group of matter and call it a single entity. The "real world" consists only of reality, only physical **stuff**. What we're being trained for is *far* from "the real world"; it's the abstract world of human imagination. The subjective, symbolic, conceptual world where green pieces of cloth have value and black, squiggly marks have meaning. Where certain patterns of air pressure contain information, and wrapping plant material around our bodies conveys status. Where a flag can influence behavior, where a costume can confer power. A world where countries, businesses and communities are "real" entities, instead of just groups of individuals. We're being trained for the world that exists only within human minds. Which is important, because it's hard to live in the real "real world". Without abstraction, we couldn't understand anything. We couldn't plan, think, organize or cooperate. But symbols and concepts aren't real, and school does not prepare people for the "real world".

Straight from the Horse's Mouth – *Sep 18, 2011*

"What essentially sets a nation-state apart, which is the monopoly on violence."
– Barack Obama (2 mins in)

Obama Speaking on Military Contractors [2.5 min video][18]

And that's exactly where I disagree, Mr. President. I think granting a monopoly on violence to ANY organization, even a democratically elected one, has a net-negative effect on society. The "troubled water" is only troubling for the elite, the ones who benefit from the monopoly on violence.

Meditation – *Nov 15, 2011*

The evidence is pretty conclusive: meditation makes your brain better. And since you emerge from your brain, it makes YOU better.

Meditation has been treated unfairly in the West. For a long time, people thought it was just another archaic ritual from the East with no scientific backing (or at least I did), but all that has changed. Researchers have consistently found that meditation has significant effects on both the minds and brains of practitioners.

The Effects of Meditation on the Brain [5 min video][19]

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[18] https://youtu.be/KpsBM1rmx-M

[19] https://youtu.be/61v5MM9Zy-c

So what's actually going on when you meditate? Our cognitive control network (the thing we call our 'self'. Our '**I**') makes up just a tiny portion of our brains, but it has a special power: the power to inhibit other regions of the brain. This is what allows 'us' (our cognitive control network) to focus our attention. We can't just turn-on the parts of our brains we're trying to use, we can only turn-down the volume of the parts we don't want to focus on. There are many forms of meditation, but they all use this power to enter a different state of consciousness. I'm most familiar with Mindfulness meditation (based on Buddhist meditation), but there are others like the Transcendental Meditation mentioned in the video.

Mindfulness meditation involves focusing attention solely on the experience of the current moment. It evokes a "present-centered" awareness in which every thought, feeling, or sensation is acknowledged and accepted as is, without judgment.

"The first component involves the self-regulation of attention so that it is maintained on immediate experience, thereby allowing for increased recognition of mental events in the present moment. The second component involves adopting a particular orientation toward one's experiences in the present moment, an orientation that is characterized by curiosity, openness, and acceptance."

Mindfulness: A Proposed Operational Definition [pdf][20]

Sounds easy enough, right? Give it a shot and see how quickly your mind wanders. No problem though, that's what minds tend to do. When you become aware that your thoughts have migrated away from your current experience, simply acknowledge it and try to re-focus on the moment. There are lots of techniques for achieving this state of mind. You can try focusing on your breathing, or the sensation of the air passing through your nose. You can try scanning your body to become aware of every sensation you're experiencing. There's Transcendental Meditation which involves repeating a mantra, or a specific sound. Whatever technique you use, once you get the hang of it you can enter a really interesting state of consciousness similar to a trance. Your ego starts to melt away as you simply watch your “mindstream” without elaboration or judgment.

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[20] http://prevention.psu.edu/projects/documents/Bishopetal.article.pdf

So how does this make your brain better? First, it allows your diverse brain regions to connect and synchronize. We like to imagine our brains as a single thinking-unit, but the truth is that we’re a collage of 100,000,000,000 neurons acting in parallel. These neurons form functional regions, but those different regions don’t always work in unison. During every-day activities, different regions can work on very different tasks. Like driving a car, planning your day and a song playing in your head, all at the same time. Meditation helps your brain make new connections and function more uniformly, as shown in the video above.

Meditation also lets us practice metacognition, or thinking-about-thinking. Learning to focus your attention improves fundamental cognitive skills that can give you more control over your brain. Skills like inhibiting unwanted thought processes, or wider awareness of ourselves and our environment. These abilities readily transfer to our everyday lives, where we often need to tune-out distractions, focus on a single activity or be aware of many things at once. It’s much easier to practice these skills in a quiet, introspective environment before we try to apply them in the real-world.

Possibly the most important skill meditation exercises is acceptance. Whether it’s personal grief, the problems we face or getting along with others, learning acceptance appears to be the key to happiness. But before we can accept anything else, we have to accept ourselves. And we have to accept our thoughts in order to accept ourselves, but that’s a lot harder than it seems. We’ve all made mistakes, and that guilt can weigh us down. Our minds can wander to places we don’t like, or grant us a new perspective on ourselves. We can be confronted with the sensation of ego-loss, and the realization that ‘**I**‘ am an illusion, which can be scary. But with practice, meditation can allow us to accept ourselves without judgment. And once we learn to accept ourselves, we can accept others for who they are, and any situation the universe throws our way.

God, grant me the serenity to accept the things I cannot change,
Courage to change the things I can,
And wisdom to know the difference.

And if you actually want these qualities, try meditating. These aren't gifts to be bestowed from on high, they're skills to be honed. We have the power to change ourselves for the better, and a great tool for the job is meditation.

Gödel's Incompleteness Theorem *– Dec 4, 2011*

Isomorphisms

I think the best way to try and understand really complex things is to use isomorphisms. An isomorphism is a relationship between two systems that preserves the structure among the parts of each system. As Douglas Hofstadter put it,

"The word 'isomorphism' applies when two complex structures can be mapped onto each other, in such a way that to each part of one structure there is a corresponding part in the other structure, where 'corresponding' means that the two parts play similar roles in their respective structures."

A school of fish and a flock of birds are isomorphic: they are both complex systems made up of individual animals, from which emerges a "super-entity" when they work together in close groups.

By drawing analogies between complex structures, we can learn more about one system, say flocks of birds, by learning about its counterpart, schools of fish. We could learn how the individual actions taken by fish, and the feedback between them, results in the emergence of collective action, and we can then apply this knowledge to flock-dynamics. We're finding a general pattern of interaction that can be applied to many different concepts. Isomorphisms grant us the ability to learn about structure rather than content. They let us learn about patterns instead of particulars. By discovering and investigating isomorphisms, we can leverage our understanding of different concepts by applying knowledge of one system to other analogous structures.

Brains and Societies

The most interesting and helpful isomorphism I've discovered is the "structure-preserving relationship" between our brains and our societies. We can learn a lot about society by studying brains, and vice versa. These two complex systems are structured in an incredibly similar way, and we can exploit this to better understand each of them. Both systems are networks composed of individual 'nodes' (people/neurons) which transfer symbols between themselves. The connections in both systems are dynamic, meaning the connections between nodes change as time progresses. You meet and communicate with different people on a daily basis, and neurons form new connections and “delete” old ones constantly. There are a variety of symbols transferred between nodes in both systems. In human societies, the symbols transferred between nodes are embedded in the way we position our bodies (body language), patterns of air pressure (speech), marks made using contrasting colors (writing), pieces of cloth with some of those marks on them (currency), certain elements (gold and silver), voltage carried on a wire (computer bits), electromagnetic radiation (wireless computer bits), the arrangement of colors displayed either on physical media (a painting) or electronically (TV/computer image), etc. We’ve learned to exchange symbols in many different patterns, and through this exchange emerge our societies. Neurons also use many different forms of communication: dopamine, serotonin, acetylcholine, epinephrine, norepinephrine, histamine and many others. And out of all of this neural exchange, we emerge. We are our neural society. While the physical substrate that encodes symbols in brains and societies are very different, the overall structure of the systems are amazingly analogous. We can imagine both our brains and societies as giant graphs where each vertex is an individual (human/neuron) and each edge is a connection between individuals along which communication takes place.

Minds and Brains

Our minds and our brains are also isomorphic. For every concept in our head, there’s an isomorphism between that concept and neural connections in our brain. Now, I couldn’t begin to tell you how this physically works at the low-level, but at the high-level we know that information is somehow being stored and processed in our brains. That means there must be some process of encoding information in the physical substrate of neurons and neural connections. Whatever that encoding process is, it embodies the isomorphism between our minds and our brains. It represents a relationship between our minds and our brains “that preserves the structure among the parts of each system”; a one-to-one mapping between the physical world of neurons and the metaphysical world of thought and experience.

Since I can imagine a flock of birds, there must be some physical neural network in my head that is isomorphic to my mental concept of a flock.

Some group of neurons exchange neurotransmitters in a particular fashion that represents my idea of a flock, and this network is activated when I imagine a group of birds. And since I can also think of a school of fish, I must have another neural network that encodes that concept. So not only are these physical neural networks isomorphic to the metaphysical ideas they represent, they are isomorphic to each other (by the transitive property of isomorphisms). The neural network that encodes ‘flock’ is structured analogously to the neural network that encodes ‘school’, and we can figure this out without doing brain surgery. We don’t have to understand how this physically works in detail to understand that’s what’s happening, simply by acknowledging that our brains encode information we can reach this conclusion.

If you follow that idea further, it means that the structure of our neural interactions encode us. All of our thoughts, hopes, fears, beliefs, motives, ideas, emotions, skills; everything in our heads is represented as patterns of neurotransmitter exchange. We emerge from this neural economy. Like a school of fish, we are the “super-entity” formed by the interaction of individual neurons when they work together in close groups. Only our neurons form a much more complex network than a school of fish (both in terms of numbers of individuals and the richness of the communication between them), so the “super-entity” that emerges from their interaction has much more complex behavior (i.e. our human behavior).

Since ideas are isomorphic to the neural connections that encode them, that explains why analogies and metaphors are so helpful for our understanding. To encode a new concept, it’s easiest for us to draw a parallel to some structure that already exists in our brains, some network of neurons that already captures the essential structure of the idea we’re learning about. We can exploit isomorphisms to help us understand complex systems by drawing analogies to less complex (or better understood) concepts. With that in mind, this is my attempt to map complex real-world systems (like evolution, consciousness, and society) onto the idea of a formal system, and then apply an interesting law of formal systems and try to understand what it could mean for the real-world.

Formal Systems

A formal system is any system (a set, group or network made up of interacting parts) consisting of symbols that interact to form theorems based on certain axioms and transformation rules. As you’ll see, a “formal system” is an incredibly general idea that can be used to model everything that can be modeled. Because the concept is so flexible, we can always find an isomorphism between any real-world system we’re trying to understand, and some formal system; so the laws of formal systems have serious implications for our knowledge of the Universe.

Symbols

Symbols can be anything, and I mean anything. Anything that encodes information, which is damn near everything: body language, speech, writing, Braille, computer bits, magnetic domains on a hard drive (magnetically stored computer bits), tiny bumps in the aluminum of a CD (optically stored computer bits), nucleotides in DNA, neurotransmitters in a synapse, neural connections in our brains, human behavior and even patterns of human interaction. Anything that encodes information can be interpreted as a symbol, big or small, simple or complex: the velocity of a particle, or the sum behavior of every human on the planet.

Theorems

In formal systems, symbols are combined into ordered arrangements called “theorems”. Every possible ordering of symbols is a theorem. For instance, in the formal system of arithmetic there are symbols like ’1′, ’2′, ’3′, ‘+’, ‘-’, ‘=’, etc, and theorems like “2 + 2 = 4″, “2 + 2 = 5″, or “=2+-=2–5″. Theorems don’t have to be true or even make sense to be theorems, they’re simply an arrangement of symbols, aka a “string” of symbols. But these strings don’t have to appear in a straight line. The symbols in a QR code are arranged on a 2D plane.

We can extend the idea of an “ordered arrangement” or string to any number of dimensions. We could call the position of every star a symbol (since it encodes information), and a galaxy a theorem (a 3D arrangement of the stars). A theorem is simply an ordered arrangement of symbols, and a symbol is anything that encodes information. Just about anything can be considered a theorem.

Axioms

Axioms are the starting point of a formal system: the first theorems that are “given” or assumed to be true, upon which you can apply transformation rules to create new theorems. For instance, Euclid used five axioms (or postulates) to create Euclidean geometry. The first four he called “absolute geometry” because he thought they were all that was necessary, but as much as he tried he couldn’t prove the 5th postulate (the Parallel Postulate) from the first four.

“In 1823, Janos Bolyai and Nicolai Lobachevsky independently realized that entirely self-consistent “non-Euclidean geometries” could be created in which the parallel postulate did not hold.” **– WolframAlpha**

Both Euclidean and non-Euclidean geometry are equally valid, yet a true theorem in one system might be false in the other. The axioms assumed by a formal system influence the definition of truth within the system.

Transformation Rules

A transformation rule (aka “inference rule”) is any way the symbols of theorems can be manipulated to create new theorems. “Any function from sets of formulae to formulae counts as a rule of inference.” For instance, many formal systems use the transformation rule modus ponens, which takes two theorems, one in the form of “If p is true, then q is true” and another in the form of “p is true” and returns the conclusion “q is true”. If all men are mortal (is true), and Socrates is a man (is true), then Socrates must be mortal (is true). Transformation rules are functions which takes theorems and return one or more new theorem(s) based solely on the ordering of the symbols.

Truth

For a formal system to have meaning, i.e. for it to be useful to us humans, we must define semantics that allow us to evaluate every theorem as either “true” or “false”. It’s important to remember that the definition of truth is simply made-up by humans in the way we define the system. As we saw with Euclid, the choice of axioms and transformation rules influence ‘truth’ within the system. Within the system of arithmetic, truth is defined so that “2 + 2 = 4” is true, and “2 + 2 = 5” is false. But we could create another formal system using the same symbols as arithmetic that defined truth in a completely different way. We could create a system where “2 + 2 = 5” was true, or we could define a true theorem to be any theorem with exactly 6 symbols, or any theorem that contains an equal sign. Obviously these definitions of truth aren’t very useful, which is why arithmetic is defined the way it is.

Proof

Theorems are “provable” if they can be derived from the axioms using only the transformation rules of the system. It’s possible to form the theorem “2 + 2 = 4” by starting with the axioms and applying a series of transformation rules, so that theorem is provable. It’s impossible to apply transformation rules to the axioms of arithmetic and create the theorem “2 + 2 = 5”, so that theorem is not provable. For a long time, mathematicians had generally accepted the premise, “If it’s true, it can be proved.” In fact, most people considered provability and truth to be one and the same. This is what’s known as “completeness”. If a system is complete, then every true theorem can be proved by applying a series of transformation rules to the axioms. This is essentially what mathematicians had always assumed: that provability and truth are synonymous; that mathematics was complete. Until Kurt Gödel came along and spoiled all their fun.

Gödel’s Incompleteness Theorem

Kurt Gödel was an Austrian mathematician and philosopher who turned the entire meaning of mathematics on its head. Gödel’s famous incompleteness theorem proved that any consistent formal system (complex enough to do arithmetic) is incomplete, meaning it contains true theorems that cannot be proved. Gödel worked with a formal system called Principia Mathematica, which was an attempt to codify all the knowledge of mathematics based solely on a single set of symbols, transformation rules and axioms. The authors thought that, if they got the right set of symbols, rules, and axioms, they could prove every truth in mathematics. Gödel showed that this was a wasted effort, because any consistent formal system (complex enough to do arithmetic) is incomplete. There will always be true arrangements of symbols that can’t be derived solely by applying transformation rules to axioms.

To prove this, Gödel relied on the rules of arithmetic, so every system must have this trivial level of complexity for his proof to apply. Essentially, what he did was to assign a unique number to every theorem in the formal system (called a Gödel number). So instead of writing out the theorem “There are infinite primes”, you could use the Gödel number 27403417579 (or whatever it is). He then devised a way of creating a theorem, with Gödel number ‘n’, that said “There is no proof of ‘n’”. If you can prove that this theorem is true, then there shouldn't have been a proof of it (according to the theorem you just proved true). That would means your formal system can be used to prove things that aren't true, you have a contradiction and your formal system is inconsistent. If you can't prove that theorem to be true, then it is true. There is no proof of the theorem, just like the theorem claims. But that means there's a true statement entailed by your formal system that can't be proved, meaning the system is incomplete. Inconsistency or incompleteness, take your pick.

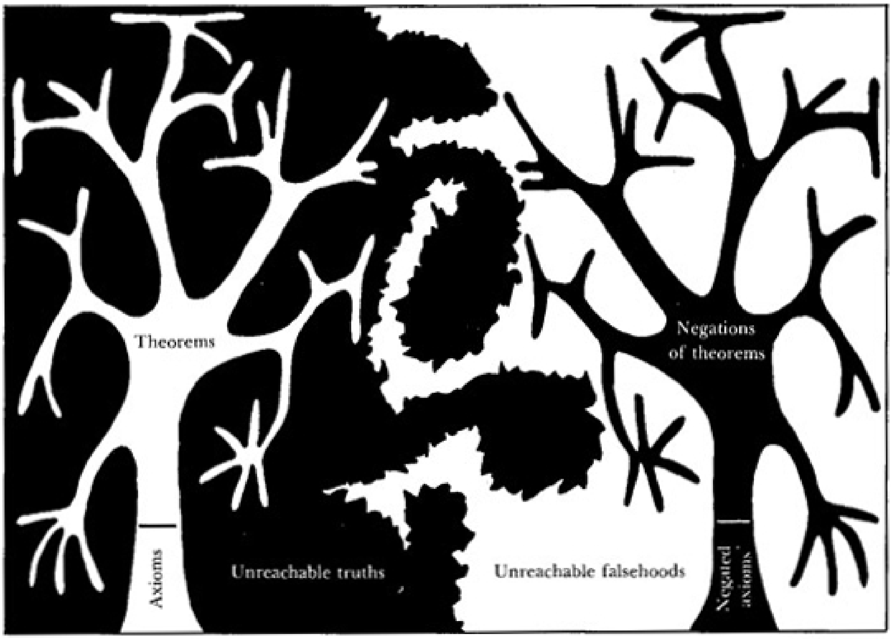

Figure 18, Chapter 3 of "Gödel, Escher, Bach" by Douglas Hofstadter

Reality as a Formal System

Because formal systems are so incredibly general, we can always create an isomorphism between some formal system and any aspect of Reality we wish to model. Remember: anything that encodes information can be a symbol, any arrangement of symbols can be a theorem, any manner of transforming theorems can be a transformation rule, and any preexisting or assumed theorems can be considered axioms. We could even encode the entire universe as a formal system: call every fundamental particle a symbol, call the arrangement of all particles at an instant a theorem, call the Laws of Physics the transformation rules, and call the position of all particles immediately after the Big Bang your axiom. Voila, we just described the entire universe as a formal system where the arrangement of all particles change based on the Laws of Physics (let’s call it the Universal Formal System). If we can use a formal system to model all of Reality, certainly we can use this idea to model a subset of it. Being able to perceive things as formal systems give us all the flexibility necessary to create complex representations of reality, but can also grant us new insight into the nature of the world around us. Besides the universe as a whole, we can create formal systems isomorphic to language, mathematics, computer science, evolution, consciousness, and even society.

It’s probably easiest to see how language, math, and computer science can be represented as formal systems. We can all recognize ‘h’, ‘+’, and ’0’ as symbols, and understand ordered arrangements of these symbols in theorems like “hello”, “2+2=4” and “00101101”. But some of those latter ones (evolution, consciousness, and society) may be a little harder to imagine as a formal system. Let’s start with evolution: I already mentioned that the nucleotides in DNA constitute the symbols. Adenine, guanine, thymine and cytosine; the only symbols necessary to encode any life-form on this planet. People like to abbreviate these symbols as A, G, T, and C, but we should keep in mind that these are complex molecules that make up our DNA sequences. Nobody needed to choose these symbols or decide how information was to be encoded. And nobody had to recognize these symbols or understand their meaning for the system to work. In fact, humanity didn’t even discover the symbols of this system until the last century, about 3.8 billion years after the system of biological evolution began here on Earth. If nucleotides form the symbols of this system, that means strings of nucleotides (otherwise known as a genetic code) form the theorems. But earlier I said that for a formal system to be useful, every theorem must be either true, or false. What could that mean in the system of biology? How could we determine whether a genetic code is true or false?

Existence is Truth in Reality

When describing Reality, we can define Truth to be equivalent to existence. In the Universal Formal System I described earlier, our axiom was the position of every fundamental particle in the instant just after the Big Bang. We could then apply the transformation rules of the system (the Laws of Physics) to the axioms to derive new theorems. These new theorems consist of the updated positions of all particles in the universe throughout time as they move and interact based on the Laws of Physics. In other words, the theorems of this formal system describe all of Existence. Every theorem you derive by applying transformation rules to the axioms of the system exists in Reality. They're snapshots of the life of the Universe, the position of everything at a given moment. These theorems are true because they exist.

So back to biology: we can call a genetic code "true" if it exists in Reality. Monkeys, bacteria, birds, trees and humans are all products of true theorems, because our DNA exists in the Universe. You can imagine how these theorems evolved according to transformation rules in a similar manner to the Universal Formal System. Instead of the position of particles after the Big Bang, our biological axiom is the sequence of nucleotides in the common ancestor of all life on Earth. This was the first arrangement of chemical symbols that was able to self-replicate. The first genetic code that made a copy of itself. The first true theorem of Life.

Since Life's last common ancestor, a lot has changed. DNA has mutated, species have changed and adapted, bringing us to the idea of "transformation rules" in this biological formal system. In evolution, a transformation rule is any process that allows a change to a DNA sequence. Think of it like adding a 5 to each side of an arithmetic equation, or perhaps inserting a thymine molecule where a cytosine belongs. Transformation rules are all the ways a theorem can be manipulated, (all the ways a genetic code can be altered), to form a new theorem. It might seem funny to call them "rules" since there are so many different ways that a genetic theorem can change, like sexual reproduction or mutations caused by cosmic rays, but you can imagine Reality, or the Laws of Physics to be the enforcer of our genetic transformation rules. Any process by which Life can alter genetic sequences is a transformation rule. Humans have categorized a number of these rules like mutations and heredity, but there are probably many that we have yet to discover. There's no limit to how many transformation rules a formal system can have (as long as it's "recursively enumerable"), so no matter how many different ways a genetic sequence can be modified, we can capture the change with a transformation rule.

Since that first self-replicating pattern of matter emerged, transformation rules have been applied left and right to change the genetic codes of Earth. The first axiom of life no longer exists, and it would be virtually impossible to recreate. Life can no longer use the original axiom to produce new theorems. So today, it makes more sense to say that the axioms of biology are all the living genetic codes. All future theorems must be generated by applying transformation rules to contemporary DNA sequences, so all living organisms serve as axioms for the future of Life. In the same light, it no longer makes sense to call the moment after the Big Bang the axiom of our Universal Formal System. Since all future occurrences in the Universe are based solely on the position of all particles now, we can think of the Present as the axiom for this system.

Applying Gödel's Theorem

So we can model Biology as a system of symbols that can be put together to form theorems, based on rules and axioms, and a consistent definition of truth. That means we've got a formal system! And since Life is far more complex than arithmetic (and can perform arithmetic: you have 5 fingers, spiders have 8 legs), we can apply Gödel's incompleteness theorem to evolutionary biology. But what does his proof mean in this context? What does it mean for Life to be incomplete?If you recall, incompleteness means that there are true theorems that cannot be proved by the system. So for biology, this means there are patterns of DNA capable of existence that can't be reached by applying rules to axioms. Which should make perfect sense: there are an infinite number of hypothetical species that could live in some environment on Earth (and why should we limit it to Earth?), but they can't be created by altering the DNA of current life-forms. Gödel's proof even shows that if we could somehow create all the possible life-forms derived from patterns of DNA, the very act of adding these species to the biological system would create niches where new patterns of DNA could exist. When you add that last species, you instantly create a new niche for some possible form of life that couldn't be created from existing genetic codes. A crude way to imagine this is that every species has a unique dependent species, like a parasite or predator, that can only exist if the host species exists. So when we try to add the final species to our system, the system is still incomplete because we haven't added its dependent species. But if we try to add that dependent species, we create another niche that must be filled. Every time we try to complete the Tree of Life, we add a new species and a new dependent organism is now possible. It’s an infinite rabbit hole: every time you try to make a new axiom or rule to make the system complete, you introduce new theorems that are true but can’t be proved.

Encoding as Integers

Gödel’s proof relies on the self-referential power of encoding information into numbers. Remember, Gödel constructed a theorem that could be encoded into an integer ‘n’, that said “There is no proof of n”. So for his proof to apply, we have to be able to encode the theorems of our formal systems into integers. As it turns out, any information can be encoded as an integer, so we can apply his proof to any formal system.

It's easy to see how a neuron firing encodes information. There’s an obvious difference between a neuron at rest and a neuron producing an action potential, and these different states represent different information. When a neuron communicates, it releases molecules into a synaptic gap, and these molecules are then absorbed by the dendrite of the receiving neuron. Neurotransmitters such as dopamine, serotonin, and adrenaline make up our neuronal alphabets, the symbols in this formal system.

Complete neuron cell diagram [image][21]

So let’s follow Gödel’s idea and encode these neurotransmitter signals into numbers. Imagine ordering all the neurotransmitters alphabetically (and let’s imagine we know them all). Acetylcholine, adenosine, anandamide, aspartate, dopamine, D-serine, GABA, glycine, and on down the list. Now imagine going in order and assigning each neurotransmitter a positive integer:

1. Acetylcholine
2. Adenosine
3. Anandamide
4. Aspartate
5. …

So now we’ve encoded each neural symbol into an integer, but what are the neural theorems? These are the combinations of individual symbols used to encode a message between neurons at a synapse. Neurotransmitters are rarely, if ever, used individually. To capture the information of a neural message, we need to be able to encode exactly which symbols are moving across a synapse at a given moment in time. To do this, we can use prime factorization to completely capture a theorem as a very large integer. We've already given each neurotransmitter a unique number; to form a theorem of n symbols (representing a set of n neurotransmitters) we can use the following function: Compose the neurotransmitters as a series $x_1x_2x_3\ldots x_n$ of positive integers, and the synaptic-theorem number is equivalent to the product of the first n primes raised to their corresponding values in the sequence:

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[21] http://bit.ly/1ZSOSnA

$$enc(x_1x_2x_3x_4\ldots x_n) = 2\wedge(x_1) * 3\wedge(x_2) * 5\wedge(x_3) * 7\wedge(x_4) * * * p_n\wedge(x_n)$$

According to the fundamental theorem of arithmetic, any number obtained in this way can be uniquely factored into prime factors, so it is possible to recover the original sequence from its synaptic-theorem number. We can take a set of neurotransmitters, turn them into an integer, and still recover the original information from that integer. That means our number has completely captured all the information traveling across the neural synapse. In other words, the synaptic-theorem number is isomorphic to the actual molecules in the synapse. There is a relationship between the molecules in the synapse and this large integer "that preserves the structure among the parts of each system"; a one-to-one mapping between the physical world of neurotransmitters and the metaphysical world of numbers.

This is exactly what Kurt Gödel did with *Principia Mathematica*. He used an encoding scheme identical to the one above to capture any mathematical theorem as a "Gödel number". He then developed a theorem, with Gödel number n, that read "There is no proof of n". The interesting thing to note is that this encoding scheme can be used to capture any information, and any amount of information, because there are infinite primes and infinite integers. So even if the encoding scheme I sketched above fails to capture all the inputs to a neuron, this idea could theoretically be extended until it completely represents the transfer of information between brain cells.

Let's walk through a DNA encoding scheme to elucidate the concept further. We've got just 4 symbols to work with, so let's make adenine = 1, cytosine = 2, guanine = 3, and thymine = 4. Now let's say we want to represent the sequence "TACGAG" as an integer. If we convert each nucleotide to its integer, we get "412313". Passing this to our encoding function, we get:

$$\text{enc}(412313) = 2^4 * 3^1 * 5^2 * 7^3 * 11^1 * 13^3 = 9{,}947{,}137{,}200$$

We can completely capture the information in the DNA sequence "TACGAG" with the number 9,947,137,200. Pretty cool, right? And since we've got infinite primes and infinite integers, we can extend this to theorems of any finite length composed of any finite number of symbols. All the information contained in the Universe can be encoded as an integer.

Implications for Property

A quick digression here, but it's extremely relevant to this idea of encoding information as integers. Property is a concept we humans use to minimize conflicts over scarce resources. Apples are scarce, because your choice to eat an apple is mutually exclusive with my choice to eat the same apple. Integers, however, aren't scarce. You can use the integer 9,947,137,200 without restricting whatsoever my ability to use the same number. So the concept of property doesn't apply to integers. No one can own an integer because that's a contradiction of terms. And if you can't own an integer, you can't own anything that can be encoded as an integer. You can't own the abstract DNA sequence "TACGAG", because to do so you would have to own the integer "9,947,137,200". Now, you could own a particular, physical genetic sequence consisting of those nucleotides, because molecules are scarce. There are only so many atoms in the universe. But you can't own the information embodied in that sequence. In fact, you can't own any information, because any and all information can be encoded as an integer. Intellectual property is an oxymoron.

Scaling-up

So hopefully I've convinced you that genetic evolution and neural communication are isomorphic to some theoretical formal system that could completely model those systems. And because of that, we can apply Gödel's theorem to Biology and Neurology. But it might be little harder to see how an entire brain, or a society, could be modeled as a formal system. What are the symbols, theorems and transformation rules for these systems?

The symbols for a neuron were physical molecules: neurotransmitters. But when we step up to the level of entire brains, the symbols are no longer individual neurotransmitters, but rather patterns of neurotransmitter exchange. The symbols are encoded in the ways neurons are connected, and the manner in which information flows between them. This is a lot harder to picture, but to simplify it we can just think of the connections of each neuron as a symbol. Like the connectome graph above, the lines extending from each vertex embodies a symbol. If neuron A is connected to neurons B, C, D, and E, then those connections embody that neuron's symbol. So then a theorem is the total set of connections within a brain, or the entire connectome. But that doesn't entirely capture the situation, because neurons can communicate in different ways even without changing their connections. Neuron A could still be connected to B, C, D, and E, but might start transferring dopamine with them instead of acetylcholine. That would mean the symbol has changed, because the symbols in this system must embody the pattern of neurotransmitter exchange that occurs at each node, not just the connections between neurons. And the theorem must capture the total information transfer of the system. Theorems of a brain-system have to capture everything going on within a brain at a given moment, the grand collection of all neural activity at a given time (ie. a complete mental state). So then, the transformation rules are the ways of moving from one theorem to another, the manner in which mental states change. This would be far too complex to try and describe at the low level, and it's difficult enough to think about at the high-level. But somehow, the collective action of neurons changes our mental state based on some unimaginably complex function. That function is the transformation rule for our brain.

If you thought that was complex and difficult to digest, now let's try an entire society. Like the brain, society's symbols are encoded in the way we humans are connected, and the manner in which information flows between us. You can imagine all your friends, family and colleagues as your connections, much like a neuron is connected to neighboring neurons. We're different in that we can move around, form and dissolve connections much easier, and use far more complex communication between nodes, but that doesn't change the fundamental structure of the system. Like the brain, it's easiest to imagine each symbol as the set of connections a person has. But again, that misses the critical information transfer between nodes. I can keep exactly the same contacts for a given period of time, but that doesn’t mean I’ll communicate with them in exactly the same way. The symbols of society must capture the pattern of communication between individuals, including both the connections and the information transferred along those connections. My symbol includes all my contacts, and the manner in which I communicate with them. Our theorem, being an ordered arrangement of symbols, must then capture all the ways humans are connected, and all the ways humans communicate. The theorem must capture everything going on in a society at a given moment. That means the grand collection of all human activity, every behavior, every social structure, anything and everything humans do. In other words, our global economy.

Imagining brains and societies as formal systems is very difficult, but remember that we don’t have to fully draw out the system to recognize that it could be described by some formal system. We have infinite integers and infinite primes to work with, so no matter how complex some pattern of interaction seems, we could ultimately capture all of its information in a very large integer.

Implications

So what does it all mean? Ultimately, it means every model of a complex system is flawed. Any model can be encoded as a formal system, and every complex formal system is incomplete. There will always be true things that we cannot prove. Said another way, there are true things about formal systems that don’t appear true from within the system. Any complex formal system built on axioms is incomplete, meaning there are true things about the system that can’t be discovered from within the system, only by stepping outside of the formal hierarchy.

For Minds

We can never completely know ourselves. We can never model ourselves fully within our own brains, because to model ourselves we would have to include the model of ourselves within our model. And then we’d have to model ourselves with that model inside it, and model that model… it’s an infinite regression. In more concrete terms, it means our belief-systems will always be either incomplete or inconsistent. We’ll never know all of the implications of the beliefs we hold. Which is important, because it means that if we only use rationality, we'll never discover all of the truth. The alternative, however, is inconsistency: if you ever believe you know all truth, you've got some contradiction in your belief system. But since inconsistency means you can't trust any of your beliefs, incompleteness is still preferable, as long as we recognize its limitations.

This limitation means we can't put too much faith in any single belief-system. By operating only within a formal system, we are destined to never find all of the true theorems. If we want to discover the truth, we have to "use only that which works, and take it from any place you can find it." Even quotes from martial artist Bruce Lee.

For Societies

The very act of making a system capable of solving social problems necessarily introduces problems that the system is unable to solve. That means unintended consequences are inherent, necessitated by the system, and that the system cannot fix these problems. Formal social systems, like governments, create problems that they can't solve. Since the system is only capable of trying solutions from within its formal repertoire, the system can only apply solutions that are incapable of solving all the problems they create.

So we can't support rigid, formal social structures. We have to take a flexible approach to solving social problems, "use only that which works, and take it from any place you can find it." Whenever we believe we have a social system that is capable of solving all of society's problems, we know that system must be inconsistent, and we can't trust any of its solutions. We must accept that all social systems are flawed, and be willing to go outside the system to find solutions.

Applying a Formal Proof to Informal Systems

The biggest problem I see in this line of thinking is that I'm applying a proof of formal systems to "informal" systems. In a formal system, the symbols, rules, axioms and definition of truth are explicit and well defined. In biology, society and our minds, they aren't. Symbols, rules, axioms, and truth arise naturally and are perpetually changing. But what Gödel proved is that there's no such thing as a formal system. Even in *Principia Mathematica*, one of the most rigorous formal systems ever created, truth was changing. There were always true statements that couldn't be proved by the current set of rules and axioms. And whenever you add a rule or axiom to try to make the system complete, the truth changes yet again. Gödel's proof means no system can capture all of the truths it entails, no system is truly formal, and our knowledge is inherently limited.

Fundamental Flaws *– Dec 24, 2011*

The vast majority of us *want* the world to be a better place. Democrats, Republicans, Anarchists, Christians, Muslims, Atheists, Soldiers, Teachers, Politicians… we all think we're working towards a better world. When your friend posts Ron Paul campaign fliers, or volunteers at a school, or protests outside of an abortion clinic, they think they're working towards a better society. So when I tell people not to vote, not to support public education, that banks shouldn't be regulated and the government shouldn't provide health care, they think I'm either insane, insidious or insincere. On the contrary, I too am working to make the world better. But where others are fighting symptoms, I'm trying to fight a disease. Where others would spend their lives correcting superficial flaws, I'm hacking away at the root of evil. We can't fix the world by electing new representatives. We can't make things better through regulation. The problems arise from the **structure of the system.** To fix them, we need to go deeper.

When a system has *inherent* problems, problems built into the very nature of the system, you can't fix it with simple tweaks. You can't slowly improve the system or work to make it better. Even worse, trying to fix something with intrinsic errors is counter-productive. It makes the built-in structural issues even harder to identify, and leads people to grow dependent on the faulty arrangement. When the very existence of a system relies on fundamental flaws, you have to tear it down and try again.

A great example of this phenomenon is the Copernican revolution. What was obvious to everyone- that the Sun and planets orbited the Earth, resulted in some very strange conclusions about the dynamics of the solar system (or should I say "Earth system"). If you track the motion of Mars through the sky over the course of a year, it appears to do a strange *loop-de-loop* where it moves backwards for a time in the sky, before resuming its forward progress (called retrograde motion).

Apparent Motion of Mars Against Background Stars [gif][22]

With an Earth-centered model, this could only be explained by adding a slew of strange assumptions about the nature of the system. Ptolemaeus invented a system that could account for this motion by introducing the idea of *epicycles*. He theorized that the planets orbited the Earth not directly, but instead by orbiting a spot in space that orbits the Earth.

Retrograde Motion in the Ptolemaic (Geocentric) System [gif][23]

In Ptolemaeus' system, the motion of all planets were based on perfect circles, so even with epicycles the predictions didn't match the observed data. To make the model fit reality, more assumptions had to be added. Epicycles had to be nested within epicycles to make the data fit. The system became ridiculously complex, even requiring the circular orbits to be offset from the center of Earth. Despite all the efforts to fine-tune the model, it was doomed by its fundamental flaws. It wasn't until Copernicus doubted the implicit assumption of the Ptolemaic system (that other planets orbit the Earth) that astronomy was able to progress.

The concept of government is based on fundamental flaws that cannot be fixed or improved slowly over time. The system makes implicit assumptions that aren't based on reality, and only by doubting those assumptions can we help humanity progress.

The implicit assumption of government is that *aggressive coercion* is necessary and beneficial to society. (Those words have a lot of connotations so let me define it once more: Coercion is "the practice of forcing another party to behave in an involuntary manner by use of threats, intimidation, fraud, or some other form of pressure or force.” Aggressive coercion means the initiation of such action against an innocent/non-coercive person.) I oppose the use of aggressive coercion not only because it is undesirable on the level of individual interactions, but more crucially because of the way it affects social structure. Yet when I explain this position to people, they often insist that I vote or get involved with politics to try to improve the government, or suggest I move to a country that doesn’t rely so heavily on the use of coercion. People overlook the fact that aggressive coercion is fundamental to the idea of government. Government cannot exist without forcing people to behave involuntarily using threats of violence. It can’t be fixed because if you fixed it, it would no longer be a government.

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[22] http://www.lasalle.edu/~smithsc/Astronomy/images/marsmovie.gif

[23] http://www.lasalle.edu/~smithsc/Astronomy/images/epicycle-move.gif

I don’t want to go into all the failings of aggressive coercion here, because I’ve written plenty about it in the past. The point of this post was simply that some systems have fundamental flaws, and it’s counterproductive to try to improve a system that’s based on incorrect assumptions.

I got the idea for comparing the fundamental problems of government to the Ptolemaic astronomical model from this fantastic video by Stefan Molyneux:

Sunset of the State [10 min video][24]

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[24] https://youtu.be/sLCEXtpTNYU

Chapter 1

Marina Childhood

After graduating from the University of Texas in December of 2011, I moved aboard Sovereignty in January 2012 and began my life as a liveaboard in Marina del Sol.

Great Day of Sailing *– Jan 28, 2012*

Finally got to get out and really sail! My good friends Jackie Miller and Sean Magin made the trip down from Austin and helped crew for Sovereignty. We had great wind and weather, also had a few slight hiccups- getting stuck in some mud and returning to the harbor after sunset, but overall everything went pretty smooth- we had lots of fun and made it back safely. Here's a map of the voyage, and a quick panorama from the middle of Galveston Bay:

GPS Track[25]

Galveston Bay [20 sec video][26]

Clear Lake is a misnomer. It's actually a wide, shallow, muddy creek with a few dredged channels that allow deep boats like mine to access Galveston Bay. Sovereignty's keel sticks down 5'2" below the waterline, and it got stuck in the mud almost instantly when I confused some distant buoys and motored out of the dredged channel.

I hadn't yet learned to back up immediately when one runs aground. In fact, I didn't even understand I was outside the channel. I kept trying to motor through the mud towards the buoy I was aiming for. We motored forwards and backwards, steering left and right, inching closer and closer to the wrong marker. Hours went by, I started thinking we'd have to wait until high tide to get off this sandbar. Luckily a tow boat came over and offered us some assistance.

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[25] http://i.imgur.com/aqBk0Wc.png

[26] https://youtu.be/RPV1MQ6CohI

He wanted $300 at first, but I told him "no thanks we'll figure it out on our own". Then he asked how much I had, I said $100, and he towed us for that. It only took him 5 minutes so he made a killing, but I was stuck deep and I have no idea how long it might have taken to get out of there otherwise. Luckily we were able to get out on Galveston Bay without any more problems and raised my sails for the first time.

Oppose Aggression Universally – *Feb 1, 2012*

Economies **emerge** from our collective actions. An economy isn't one physical entity, it's a system of human interaction, a network of individuals talking and trading. In networks like this, high-level order can emerge from individuals following very simple rules.

The behavior of the overall economy is directed by the beliefs individuals hold, and the actions those beliefs compel them to take. Like birds trying to keep space and head in the same direction, the rules we follow as individuals affect the structure of the entire flock.

So what makes a good economy; what goals should we have when thinking about rules for individuals to follow? I think we should prefer an economy that can fulfill as many desires as possible, while minimizing the suffering it inflicts. We want rules that would encourage everyone to work towards making each other happy without making anyone miserable. Of course, what we want out of an economy is a subjective question open to debate. But once you decide on a goal, then the question becomes: which beliefs held by individuals would result in the emergence of an economy that best meets those goals? Given my goal for the economy, the question becomes: what rules should individuals follow to best fulfill desires while minimizing suffering. And I think the answer is three simple words: "oppose aggression universally".

The Non-Aggression Principle

A free market is rooted in adherence to the non-aggression principle (NAP). The NAP asserts that aggression is inherently illegitimate, that initiating a fraudulent, threatening or violent act is never just. The non-aggression principle is a very clear lens through which we can see right and wrong. Aggression is wrong, and everything else is morally permissible. Permissible doesn't mean good or righteous, but that it would be wrong to use aggression to prevent it. A good example would be drug use: It's not necessarily good, but it's also not an act of aggression towards anyone else. Therefore, it is morally permissible, and it would be wrong to use fraud, threats, or violence to prevent someone from using drugs.

Of course, defending yourself from aggression is perfectly permissible according to the NAP. Once someone has threatened or attacked you, you are free to use fraud, threats, or violence against the aggressor. The NAP is only interested in the *initiation* of force, and declares that it is always immoral.

I don't believe the NAP is the be-all and end-all of morality. I don't think it's the only rule individuals need to follow in order to "optimize" the economy (in terms of fulfilling desires and avoiding suffering). But I do believe it's an extremely useful first-approximation. It's a simple way of seeing the world that paints everything as black and white, morally prohibited and morally permissible, and for the vast majority of human interaction it appears to ring true.

I'm sure we can think of situations where the NAP isn't appropriate: maybe tackling a child who's about to get hit by a car (violence), or giving someone a placebo and telling them it's medication (fraud). Sometimes it isn't clear who's initiating force: If I threaten someone for trespassing, who's the aggressor? What if he doesn't recognize my property claim? Unfortunately, the world is too complex for any single moral theory to handle every situation. But the non-aggression principle is the closest I've found, and I think it's important to double-check any ethical framework by comparing it to the NAP. If you're breaking the NAP (or supporting an action that breaks the NAP), you better make sure you've really thought it through and you're doing the right thing.

Through the Lens of the Individual

There are two very different perspectives we can take when thinking about economies: the individual and society. People love to talk about what's best for society, what society agreed on, what society wants, what society approves of, but we have to always keep in mind that *society doesn't physically exist*. Society is an abstraction. It's a way of simplifying what's actually there, which is individuals interacting. Society can't agree on anything, it can't want anything, it can't approve of anything, because it's not an actual entity. Only individuals can make decisions like that.

That's not to say that it's a useless term, or that it's pointless to talk about society. It’s a useful abstraction, but in the back of our heads we have to remember that we’re really talking about a group of individuals. A perfect example is the social contract: supposedly, society agreed that government was necessary, and consented to giving up some freedoms to protect the rest. But I never signed a social contract, did you? I never agreed to be governed, and it’s not obvious to me that you can protect freedoms by giving up freedoms. The claim is that society consented to government for each of us without any of its members consenting directly, but that’s a dangerous proposition. You could use the same claim to support *anything*, since society can never object (after all, it’s just an abstraction, not an entity). Only individuals can object, yet they are silenced with the argument that society agreed for them.

So when we talk about markets, or morality, we have to check everything through the lens of the individual. Only individuals think, act, and make choices, and only individuals can suffer or have desires, so any concept of the economy or ethics must reflect this fact.

Personal Behavior Protocols

The beliefs we hold as individuals can be thought of as behavior protocols mapping inputs from the senses to outputs in our muscles. Granted, this washes over the whole of human consciousness and experience, but we can get a new perspective of economies by thinking of individuals as blind rule followers, much like neurons within a brain. Each neuron performs incredibly complex calculations, complete with a personal memory and internal rules, but when considering the behavior of an entire brain it’s easiest to picture each neuron as simply mapping inputs to outputs. When we approach human economies in a similar way, we can think about the forms of high-level behavior that emerge when individuals use different personal behavior protocols.

Let’s imagine one possible behavior protocol is to always submit to aggression. We could call this the “Submission Protocol”. Now let’s imagine what would happen if a significant portion of the population followed the Submission Protocol. Aggression would be highly profitable, because all one would have to do is issue a threat and most people would give in. Issuing threats is very cheap, all it takes is some words. If most individuals follow the Submission Protocol, then the benefits of issuing a threat generally outweigh its costs, and aggression becomes a permanent structure in the economy.

Now let's consider another behavior protocol: the "Defender Protocol". People following this rule will always attempt to defend themselves from aggression. If someone issues a threat, say: "Give me a quarter of your earnings every year, or else I will kidnap you and lock you in a cage." The Defender will always say: "Catch me if you can." He will always stand his ground and defend himself. What effects would this behavior protocol have on aggression if it became widespread in the economy? Well, issuing a threat would no longer be cheap, because Defenders would force aggressors to carry them out. Threats of violence have a very interesting quality: they're almost free to issue, but expensive to enforce. It's easy to say, "Hand me your money or I'll kidnap you." It's a lot harder to actually kidnap people who are willing to defend themselves. So aggression becomes expensive- it requires significant resources and manpower, and it's not guaranteed to be successful. That means aggression becomes less profitable, it has higher costs and reduced benefits to the aggressor. And since it's less profitable, that means it will be less prevalent. People generally don't initiate force unless they stand to profit from it. So widespread adoption of the Defender Protocol will tend to reduce the amount of aggression in the economy.

Societal Effects of Aggression

So we can see that the beliefs and behaviors we adopt as individuals influence the amount of aggression in the economy, but how does the amount of aggression affect the economy's ability to fulfill desires and avoid suffering? Isn't it possible that aggression could be used to the benefit of society, perhaps if it's harnessed appropriately?

No, it can't. Clearly no individual wants to be aggressed, so we can see through the lens of the individual that aggression increases suffering. But there's still the possibility that the overall effect on the economy benefits each of us enough to outweigh the suffering caused by being aggressed. This, too, is untrue.

The most effective way to allocate resources, in other words, the best way to fulfill desires and avoid suffering, is to harness the evolutionary search of the free market. This is because of the distributed nature of information within an economy. No one knows your desires, or what causes you suffering, or the supply of various resources at your disposal more than you do. The information necessary for the economy to meet our goals is held in the grass-roots, at the level of the individual. So the question is, what is the most effective mechanism for sharing this information? How can we get the overall economy to act based on the information held in a distributed manner by individuals? And the answer is, the price system.

“The Use of Knowledge in Society" by Friedrich Hayek[27]

Prices are how information is transferred at the system-level. Prices allow each of us to act based on all the available information about supply and demand, without needing to understand any of the particulars. They allow us to reduce our consumption of resources that experience a drop in supply without ever knowing what happened to make the supply drop, simply because we see the price increase. Prices tell us to increase or decrease the production of certain goods without having to understand why fickle humans changed their preferences- it’s all transmitted in the form of prices. The way to optimize the system, the way to fulfill as many desires as possible and avoid suffering, is to let the information flow uncorrupted and uninhibited. We have to let people tell each other what they want, and what they have, by allowing them to freely exchange goods and services.

Aggression isn’t bad just because. It’s bad because it inhibits the flow of information through prices. It interferes with the evolutionary search of the free market. It prevents us from testing new patterns of specialization and trade that could benefit the entire system. It corrupts the flow of dopamine in the hivemind; it directs money towards places it wouldn’t naturally flow, preventing us from meeting desires and causing undue suffering. The perceived legitimacy of aggression is a fundamental flaw at the heart of the Government.

As long as individuals follow the Submission Protocol, it will be cheap for aggressors to extort their money and spend it somewhere else. Instead of utilizing the distributed information held by individuals to allocate resources, resources will be allocated based on the desires of the aggressors. And since aggressors are a minority, they clearly don’t have as much information as the entire collective. No subset of a population can spend money in a more “optimal” way than each individual spending their own money. Limiting the amount of societal aggression is the only way to meet more of our individual desires and reduce personal suffering. And to do that, we must adopt the Defender Protocol. We must oppose aggression universally.

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[27] http://www.econlib.org/library/Essays/hykKnw1.html

And what would happen if we all adopted the Non-Aggression Principle? Here’s what I think a free market might look like:

A Free Market – *Feb 3, 2012*

So what would it be like to live in a society that embraced the Non-Aggression Principle? What would happen if we all opposed aggression universally? What would a free market look like?

It would be radically different than what we’ve got now, that much is certain. But of all the differences I can imagine, not one of them is a change for the worse. Obviously there would still be roads, schools, hospitals and defense. Changing the fundamental assumptions of a society doesn’t change its basic necessities. What would be different is how they’re built, and how they evolve.

Let’s imagine we’re parents trying to educate our kids in a free market. We live in a fairly large city, so there are a number of options available to us. First, there’s the Community School System. This is a donation-based, community run project with democratic elections, a board of directors, various administrators and a series of elementary schools, junior highs and high schools. Basically, it’s your run-of-the-mill school district in a planned economy, except for one crucial difference: all funding is obtained voluntarily. Remember, we’re in a society that adheres to the Non-Aggression Principle. No one would submit to a property-based extortion racket, even if the aggressor claimed they would use the funds to educate children. No, here in a free market, all funding is obtained through voluntary transactions, and people are happy to donate. Except donations don’t go directly to the board of directors, they go wherever the donor decides.

This turns out to be a crucial difference. Where a planned economy extorts funds and hands them to the top of the hierarchy, letting administrators decide where money is spent all the way down the pyramid, people in a free market can fund any part of the system they choose. This completely changes the incentive structure of the school system. Teachers wouldn’t try to impress their administrators, they try to impress their students and parents. Non-functioning programs wouldn’t keep getting funded simply because it was a principal’s pet project, it would require community approval (in the form of donations) in order to keep working. Of course, people wouldn’t have to donate directly to teachers. People could still donate to the top, for instance, if they believe that the administration better knew where to spend the money than they did. The difference is they don’t have to. People could donate directly to a teacher who made a difference, or to a program they support, or a particular school that’s doing well. And this is what gives a free market the advantage over any centrally-planned system: by changing the incentive structure, you change the way the system evolves.

A system like this, with an informal funding scheme, will always adapt better to the desires of society than a centrally-planned system. Teachers, principals, schools, and even the whole district, will constantly be evaluating their ability to fulfill the desires of their funders. If a school adopted some terrible policy, perhaps threatening to kidnap parents if their children didn’t show up, they would lose all their funding in an instant. Who in their right mind would donate to such an organization? If a teacher taught his/her students that life on Earth began a few thousand years ago, and all living creatures simply appeared one moment in their current form, they would rightly lose their income. There would always be a serious disincentive to wrongdoing, and a huge incentive for innovation, because that’s how you would get paid. It’s not who’s in charge, it’s the incentive structure that matters.

The donation-based Community School System is one possible model, but no doubt others would develop. There would likely be for-profit schools, individual mentors, homeschooling and even unschooling. In a system where aggression is universally opposed, the only way to receive funding is through voluntary exchange. And that means, only those enterprises that fulfill people’s desires will be funded. Unproductive, inefficient, or outright immoral systems will eventually run out of money and go bankrupt, leaving more labor and resources available for use in the working models. Good methods of education flourish, bad methods die out.

“But what about the roads?!?!” Obviously, just because people oppose aggression universally doesn’t mean they will be forever trapped on their land, immobilized by their inability to construct a transportation network. Roads will still be built, only they will better reflect the desires of locomotors, and like the schools they will evolve over time to better meet the needs of the community. There could be privately maintained toll-roads, donation-based community highways, neighborhood-built streets, a whole variety of options are available. Far from trapping us in our homes, a free market would allow our streets to constantly adapt to our needs and desires. And without a doubt, you would never be punished for safely crossing a deserted street simply because a light was the wrong color. The incentive structure of the free market means the roads will adapt to us, not a central planning regime with questionable motives.

“But hospitals would turn away the poor!!!” Only if the community wants them to. In a free market, we all decide how the hospitals work by contributing to the models we like. My guess is, donation-based systems would win out. Without an artificially restricted supply of doctors, a monopoly of drug testing, or limiting the ability of patients to obtain medication, healthcare prices would be far cheaper anyway. Instead of forcing people to contribute to a central planner that doles out funds to private healthcare companies, we could voluntarily contribute to community hospitals that cover everyone for free. Or we could each pay our own costs at for-profit hospitals, or any number of solutions in between. Whatever people want to pay for is what people get, and considering everyone’s first objection is to the treatment of the poor, I have no doubt that the poor will be covered.

“But how would we defend ourselves??? Wouldn’t another country just take over? Wouldn’t companies start an arms race to become our new oppressors?” Of course not. Like I’ve said many times, threats of violence have a special property: they’re only cheap and effective as long as the majority submits without a fight. If we’re living in a society where everyone opposed aggression, it would be unprofitable to try to collect money by force. It doesn’t matter if it’s another country, a gang, the mafia or a large company, no one would do it if they stand to lose money, and as long as we defend ourselves it will never be profitable. Of course, that doesn’t mean no one would try. Defense is still an important part of any society, and my guess is we’d develop a system of mutual-defense organizations to protect ourselves from external threats. Like the militias this country was founded with, these would be volunteer groups who want to defend their communities. They could all agree that, if any individual is threatened or attacked, the whole organization would fight to defend them. Of course, professional soldiers could arise too. Or donation-based peacekeepers, or private security, or other unpredictable solutions to the problem of aggression. Again, the key is the incentive structure. In a free market, defenders will rely on voluntary transactions to receive funding. Unlike government-run "security" funded through extortion, the police and soldiers of a free market will answer to us. Otherwise, they won't receive a paycheck, and the business will go broke. Only defense organizations that meet the needs of the community will survive and prosper.

Obviously, I can't predict how a free market will actually turn out. This is just an overview of my best guess, a flavor of what freedom might look like and how it could evolve. There's no way for an individual like myself to know all the distributed information held in the grassroots of society. The only way to figure it out is to allow people to exchange goods and services voluntarily, to let the price system find the optimal patterns of specialization and trade. But I do know one thing for certain: it will be better.

Presumptions of Liquidity – *Feb 3, 2012*

This is an excerpt from a ZeroHedge article about Treasury yields that I don't completely understand, but I love the metaphor in this section and I think it's helpful in understanding the overall economy. It took me a few times through to really appreciate it. I must have read the underlined sentence 10 times, it seems particularly insightful but tough to understand.

"Liquidity acts in a financial system like ample water, ambient temperature, and clean air act in an ecosystem. It makes trading strategies proliferate. Further, it makes meaningful intermediation possible, fostering the growth in high yield bonds and marketable loans. Yes, derivatives like vanilla stock options and others too.

A financial system without liquidity is like a tropical ecosystem dried into a desert. Without liquidity, it is an open question whether the arbitrage pricing revolution will outlast the antiquated mark-ups of reinsurers. Liquidity makes random processes stationary, which is crucial to make the probabilistic foundations of risk neutral pricing work. Is it intuitively possible to price (and *even more buy and sell) credit and interest rate risk without some liquidity in the underlying? How can a bank generate carry when the curve is flat and there is no appreciable differential anywhere that has a minimum tolerance of liquidity?*

I put together an impressionistic schema to convey my point about liquidity. It not only demonstrates instruments stop functioning, but even wholesale trading strategies have to be abandoned. Traders will not only have a limited palette of instruments; for survival, they will also have to simplify trading strategies to those that are proven across extremely wide environments. In financial markets, liquidity is what makes innovation possible. Innovation adds complexity and diversity to an ecosystem, but it doesn't make the system robust. Even minuscule changes in environment cause life to revert back to sparsely populated rhythms."

Treasury Bears & Extinction Events[28]

Here's what I got out of that (mixed with some of my own thoughts): To understand the economy, we really have to think of businesses, or trading strategies, as species in an environment. When there's ample liquidity, when there's enough money sloshing around, trading strategies flourish, just like species in a rainforest. There's a lot of energy arbitrage to be made when there's ample liquidity; it's easy to find a gap in the flow of energy, squeeze in there and make some complexity out of it, both in the biological and financial ecosystems. In a financial ecosystem, that means finding somewhere to be a middle-man, somewhere you can buy and sell to make a profit. In the biological ecosystem, it means some pattern of producing and consuming energy where you produce more than you consume. This metaphor of businesses as biological species is an incredibly helpful isomorphism, or analogy, that can really help us understand both systems.

"Liquidity makes random processes stationary, which is crucial to make the probabilistic foundations of risk neutral pricing work." I think what this means is, given enough liquidity, given enough money moving around the

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[28] http://www.zerohedge.com/news/guest-post-treasury-bears-and-extinction-events

economy (or more importantly, the financial sector), you can make some assumptions based on probability that can make a profit with almost no risk. Like if there’s an infinite source of water just below the surface, a tree can grow (produce more energy than it consumes) indefinitely with little risk by making some probabilistic assumptions about the weather (which is a pretty random process, one that the underground liquidity makes “stationary”). But if that liquidity dries up, if the underground source of water disappears, then the probabilistic model about the random weather might not work any more, and all of the sudden there’s a lot more risk in the system than anyone realized. Just so in financial markets, when liquidity dries up, when less money moves around, when people lose confidence and are afraid to make exchanges, then those probabilities assumed by financial institutions can no longer smooth over random variations. So called “Black Swans“, supposedly unlikely events, can be catastrophic, causing systemic collapse. A highly unlikely drought could kill the tree if there isn’t the underground liquidity source.

His chart is an evolutionary tree, growing from bottom to top. Just like in nature, most strategies go extinct, but new ones are created, and some patterns continue unchanged for a very long time. Complexity is hard won;, it can’t be intuited and , it requires trial and error. Trading strategies often die out, but with increases in liquidity (like in each of the stages moving up from bottom to top), the ecosystem can sustain greater complexity. But, when liquidity dries up in a highly complex, incredibly fragile ecosystem, well… *“Even minuscule changes in environment cause life to revert back to sparsely populated rhythms.”* Which simply means, “simpler”, a loss of complexity. An extinction event in nature or an economic collapse in human societies. In either case, it means a reduction in the number of strategies that are able to survive.

The Trick – *Feb 11, 2012*

Here’s how they did it: they bought enough Congressional votes to pass a bill (not that hard to do). The bill granted their organization the exclusive right to print money in the United States. So they could have printed and spent as much money as they wanted, for free. They manipulated the strings of the US government until it gave them a money tree.

But that wasn’t the trick. The trick was- instead of just printing dollars, they printed notes of debt that were redeemable for dollars. You see, a dollar bill is not a dollar. It's a bill for a dollar, a representation of a debt owed to the bill holder. It's an IOU for a dollar. So now, the money they issue as legal tender, enforced by the US government, was an instrument of debt. They manipulated the entire world into thinking an IOU was the same as the underlying asset it was redeemable for! But that's not the whole trick.

So instead of spending money into the economy, they loaned it into the economy. All money is now loaned into existence; they lease us the money supply. We have to pay this organization just to use money, and the government enforces their monopoly with force. But a loan always has two components- principal, and interest. So in order to use money, we (the collective 'we' of the economy) have to pay back the money we use, plus interest. But wait, if all money is loaned into existence, how can you ever pay it back, plus interest? If all money is debt, owed back plus something extra, where can the extra come from? If a loan is principal plus interest (p+i), and the money supply is made up completely of the principal (p), where can the interest (i) come from? And that's the trick- that's how they turned us into slaves.

We can never, ever pay off our debts. The very structure of the system prevents us (again, the collective us) from ever achieving financial freedom. This organization enslaved us through our money, using the handy tool of government to enforce their monopoly. In order for everyone to pay back their debts, more debt must be taken on. The only way to pay back the principal plus interest is to take out a loan for more principal. And then to pay back the interest on that loan, more debt must be taken on. In order for everyone to pay back their debts, the system must keep growing. If everyone tried to pay back their debts at the same time, we would run out of money before we ran out of debt. Infinite growth is a fundamental assumption of the monetary system we live in.

Hopefully you can see this isn't a new trick. It's a Ponzi scheme, plain and simple. And like all Ponzi schemes, it will fail when it can no longer grow. Look around and you can see it unraveling. When you build a system with the fundamental, structural assumption of infinite growth, it collapses when it stops growing. The system just can't work unless it keeps growing, and if it can't work, it won't work.

This is the paradigm change we are experiencing. The era of cheap energy is over, and the economy can no longer sustain growth. The monetary system will collapse. This isn't just a possibility, it is a mathematical certainty. The only variable is timing, and it looks like it will be sooner rather than later. This isn't the kind of thing you want to play chicken with; a year early is better than a day late. Prepare accordingly.

"Lenin is said to have declared that the best way to destroy the Capitalist System was to debauch the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. By this method they not only confiscate, but they confiscate arbitrarily; and, while the process impoverishes many, it actually enriches some. The sight of this arbitrary rearrangement of riches strikes not only at security, but at confidence in the equity of the existing distribution of wealth. Those to whom the system brings windfalls, beyond their deserts and even beyond their expectations or desires, become "profiteers,", who are the object of the hatred of the bourgeoisie, whom the inflationism has impoverished, not less than of the proletariat. As the inflation proceeds and the real value of the currency fluctuates wildly from month to month, all permanent relations between debtors and creditors, which form the ultimate foundation of capitalism, become so utterly disordered as to be almost meaningless; and the process of wealth-getting degenerates into a gamble and a lottery.

Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose." **– John Maynard Keynes**

A Cold Day on the Bay *– Feb 12, 2012*

It was cold and cloudy, but that wouldn't stop us. Nick, Steph and Commodore Edward joined me for a voyage yesterday (2/12/12); good times were had. We motored out into Galveston Bay and put up the sails, headed Northeast on a close reach for about an hour and then dropped anchor for lunch above 10' of water. Our amazing cooks, Steph and the Commodore, made chicken salad sandwiches and a mushroom salad, and brought goat cheese, venison sausage and Sangria, spoiling me given my microwave-stew routine. (The microwave being my only functional cooking device at this point). We sailed back on a run downwind, got the sails set wing-to-wing at one point. A fun day even without the sun.

Photo Album[29]

Building a Cognitive Toolbox *– Feb 15, 2012*

I've made this post into a series of videos. I've embedded them within the post, you can scroll through and use the QR codes to reveal each video, or scan below to watch the entire playlist.

Building a Cognitive Toolbox [18 video playlist][30]

Watch the introductory video [3 min][31]

The universe is not intuitive. Our senses are fallible and our assumptions can be faulty. What seems true usually isn't. Luckily, we can build a cognitive toolbox to help us reason our way through this strange wilderness we call Reality.

Watch video 2 – Pruning our Belief-trees [2 min][32]

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[29] http://m.imgur.com/a/a8FLF

[30] https://youtube.com/playlist?list=PLEA4C2E279C965AC4

[31] https://youtu.be/YyFLk2XW8Dc?list=PLEA4C2E279C965AC4

[32] https://youtu.be/a_leWoBQKcM?list=PLEA4C2E279C965AC4

But before we can start building, we have to decide on a purpose. A tool is a means to an end; before we pick the tools we have to know what job we're working on. A cognitive toolbox will allow us to form and reshape our beliefs, "pruning our belief-tree", but what do you want out of your beliefs? How would you like your belief-tree to grow? What fruits would you have it bear?

We can hold beliefs for various reasons. Beliefs can bring emotional comfort, or more commonly, avoid discomfort. They can influence and be influenced by our social connections. But we have to recognize that beliefs drive behavior, and if we want to behave "appropriately", we have to hold beliefs that are consistent with Reality. As I wrote in Sanity Check, "holding 'feel-good' beliefs is nice, but it won't help you interact with the universe."

We take action in the physical world in order to accomplish some goal, consciously or unconsciously. What we believe determines how that goal is translated into behavior. We decide to take particular actions because we believe they will produce particular results. If our beliefs are not consistent with Reality, then the results of our actions will be inconsistent with our goals, and we will have acted "inappropriately".

"You can ignore reality, but you can't ignore the consequences of ignoring reality." **– Ayn Rand**

The purpose we choose for our belief-system is a critical decision that will affect everything about our lives. The choice to use beliefs for emotional support is dangerous not only because we might act "inappropriately", but because it could become a trap. Once you enter the maze of self-delusion, it's incredibly difficult to find the exit. The safest choice is to plant (or re-plant) your belief-tree firmly in the bedrock of Reality. It might feel uncomfortable at first, but we can adapt, and soon grow to appreciate sanity.

Watch video 3 – Cogito Ergo Sum [1 min][33]

But where to start? Where should we plant the seed of our belief-tree? We have to go to the very bottom, doubt everything that can be doubted and start from scratch. Let’s begin with the only thing we can know for certain: cogito ergo sum.

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[33] https://youtu.be/cqFCnnLeBmY?list=PLEA4C2E279C965AC4

So I exist. Now what? Well unfortunately, that’s as far as we can get with absolute certainty. To believe anything else, we have to start making assumptions. But all assumptions are not created equal. We can reason about potential assumptions to determine whether they might help or hinder us. And that brings us to the first tool in our toolbox: Lex Parsimoniae, the Law of Parsimony, more commonly known as Occam’s Razor.

Lex Parsimoniae

Watch video 4 – The Law of Parsimony [3 min][34]

Occam’s Razor is generally misinterpreted as “The simplest explanation is usually right”. This tool actually has nothing to do with what is true and what is false. Occam’s Razor only tells us what we should believe, not what actually is. Occam could care less about Reality, he wanted to help us build better models of it in our brains. This is an important distinction, because Reality is very, very complicated. The simplest explanation isn’t usually right. But the simplest explanation is the best explanation to believe.

Occam’s Razor tells us which story we should believe when we can’t tell any difference between their outcomes. But, if you can’t tell the difference between their outcomes, why does it matter which story you believe? We think of a story as a single unit, but they’re really made up of many smaller beliefs and assumptions. When a child finds presents beneath the tree on Christmas morning, there are at least two possible stories that fit the observations. One is that Santa Claus rode in a sleigh pulled by flying reindeer and delivered presents all across the world in a single night. The other is that the child’s parents bought the presents and put them under the tree. To believe the Santa story, you not only have to believe in Santa, but flying reindeer, elves, an endless toy sack, a fat man squeezing down the chimney, and possibly even faster-than-light travel. That’s a lot of assumptions to add to our belief system, and that’s where we can get into trouble: we could start basing new beliefs off of those false assumptions without ever testing them, and end up with a whole chain of incorrect beliefs (which could then make us act “inappropriately” in Reality). The most parsimonious explanation is the story that explains all the observations while introducing the fewest new assumptions, and that’s the safest story to believe. If we’re going to make an error, we should err on the side of disbelief, because it turns out our brains react very differently to different types of errors.

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[34] https://youtu.be/hdAaeWlZ2Lo?list=PLEA4C2E279C965AC4

Types of Errors

All assumptions are not made equal because all mistakes are not made equal, especially not in the human mind. Our brains come with built-in cognitive biases that can blur our image of Reality. These are known, proven defects in the way the human mind works. All of us will predictably make these mistakes, unless we know enough about them to counter their effects. It turns out that many of our cognitive biases encourage us to form beliefs before we really should.

We’re pattern seekers. That’s what we do. Our brains are always looking for the signal in the noise, and our amplifiers are turned all the way up. Our environment selectively bred us for pattern-matching overdrive by killing off our less-observant (or more-skeptical), would-be ancestors. Believing things that are false wasn’t as dangerous to our ancestors as not-believing things that are true. Making more type I errors (false positive) than type II errors (false negative) turns out to be a useful trait for survival. The standard example is an early human that hears a rustling in the bushes. It’s extremely beneficial to assume it’s a tiger if it really is a tiger, and the penalty if it’s just the wind is low (which would be a type I error, believing something that’s actually false). If, however, the person doesn’t notice the pattern, or isn’t convinced it’s a tiger, and it is in fact a tiger (which would be a type II error, disbelieving something that’s actually true), then that DNA isn’t passed on.

Watch video 5 – Correcting Errors [2 min][35]

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[35] https://youtu.be/-_FPGcUPaXI?list=PLEA4C2E279C965AC4

This ingrained cognitive bias wreaks havoc on our modern minds. Now that we're trying to understand the world instead of just pass on our genes, we have to work to overcome our instinctual irrationality. Not only do we tend to believe things before we should, our brains actively conform our perceptions to what we already believe.

The Spinning Dancer [gif][36]

This dancer can be seen spinning either clockwise or counterclockwise, but once you see her going one way, it's nearly impossible to see the other perspective. But unfortunately, this cognitive bias isn't limited to our visual perceptions.

This is why it's much more dangerous for modern humans to believe something that isn't true (type I error, false positive) than to not-believe something that is true (type II error, false negative). With the former, your cognitive biases start working to conform your perception of reality to the false belief. Not only do we make more type I errors than we should, but they can become cascading errors that form the basis for more mistaken beliefs, and they all appear to be true.

Not-believing something that turns out true is much easier to fix, because once we find compelling evidence that it is, in fact, true we will be quick to adopt that doctrine. Our brains are constantly on pattern-seeking overdrive, and always working to conform our perceptions to what we already believe; we have to compensate by being skeptical.

Our First Assumption

Watch video 6 – Objective Reality Exists [3 min][37]

Now that we've laid some groundwork concerning which types of errors we’re willing to make, it’s time to make our first assumption: objective reality exists.

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[36] https://en.m.wikipedia.org/wiki/Spinning_Dancer

[37] https://youtu.be/Hcl5L9P3n4E?list=PLEA4C2E279C965AC4

We can’t know if there is anything outside our own minds. All we are aware of is our subjective experience. There is no way to know that our senses are conveying accurate information about the outside world to us. We could be brains in a vat connected to a reality-simulator, or plugged into the Matrix. For anyone who’s ever had a dream, we also know it’s possible to be fully convinced that our subjective experience is real, even when it isn’t. So why do we assume objective reality exists, and that our experience while awake reveals information about this outside world?

It’s a safe, useful assumption to make. We know we’re experiencing something, so it’s useful to try to understand that environment. Even if it’s not the “root” reality, even if we are plugged into the Matrix, this is the reality in which we act, so it would be helpful to have a model of it so we can behave appropriately in pursuit of our goals. And assuming we live in objective reality also fulfills Occam’s Razor: it’s the belief that best describes the evidence while introducing the fewest new assumptions. To believe we are in the Matrix would require new assumptions, and we wouldn’t be able to tell any difference from “the root Reality” anyway, so the Law of Parsimony suggests we assume the external world exists, and that we live in the most “basic” level of it.

Abstractions

Watch video 7 – Abstractions [3 min][38]

Next, we can introduce a whole class of tools called ‘abstractions’ to help us understand this objective reality. An abstraction is a concept or idea that simplifies the underlying piece of Reality it represents. A cloud, for instance, is an obvious abstraction. In the physical world of atoms, there is no ‘cloud’. There is just a region of space with a higher concentration of water vapor molecules than the surrounding regions. It has no boundaries to distinguish it from the rest of the universe, and there’s no objective reason to draw a circle around it and call it a single entity. But we call it a cloud because it's simpler.

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[38] https://youtu.be/U176xKRWfM4?list=PLEA4C2E279C965AC4

The physical universe that (we assume) exists outside our minds is a world without ideas, words, concepts, groups, abstractions or systems. Reality is simply the physical substrate, the particles our universe is composed of: neutrinos, quarks, muons, etc. Each individual particle interacts with each other individual particle based solely on the Laws of Nature, of which we have discovered four fundamental forces. There aren't even atoms in Reality, that's an idea invented by humans to simplify the underlying physics of subatomic particles. Our feeble minds can't begin to comprehend the universe it in its totality, so we simplify it. We organize our perceptions, infer causal relationships, and group things together into a consistent model of the universe. But our model is no where near the real thing.

It's easy to get caught up in the human perspective, to think that our concepts accurately reflect reality. And sometimes they do. But far more often, they're only useful tools. Without abstraction, we couldn't understand anything. We couldn't plan, think, organize or cooperate. But we have to recognize that abstractions aren't the same as the things they simplify, and sometimes the devil's in the details.

Bayesian Inference

Watch video 8 – Bayesian Inference [6 min][39]

So we know our beliefs, concepts, and ideas are limited and fallible. How can we tell which ones are better? If every model we conceive of is wrong, which one should we use?

For once, a minister can help us decide what to believe. Reverend Thomas Bayes came up with a procedure for updating the confidence we have in our beliefs when new evidence becomes available. He recognized that the degree to which we believe something can be represented as a probability, where 1 is absolutely certain knowledge (like the belief that I exist, cogito ergo sum, or a tautology) and 0 is absolute certainty the belief is false (like a contradiction, 2+2=5). Every other belief is somewhere in between. We have some degree of belief, some level of confidence in our belief being true.

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[39] https://youtu.be/Dq1rT3mGQUU?list=PLEA4C2E279C965AC4

Bayesian inference is justified by the philosophy of Bayesian probability, which asserts that degrees of belief may be represented by probabilities, and that Bayes’ theorem provides the rational update given the evidence.

Here’s how Bayes’ Theorem works: let’s say we want to determine the probability that someone has a disease, given the evidence that they test positive for the disease. We can write that as “P(disease | test-positive)”, read “The probability the disease is present given a positive test result”; the ‘|’ symbol means “given”. What Bayes showed is that this probability is equal to “the probability of a positive test result, given that someone has the disease, multiplied by the prior probability of having the disease, all divided by the prior probability of a positive test result.

$$P(\text{disease} \mid \text{test-positive}) = \frac{P(\text{test-positive} \mid \text{disease}) * P(\text{disease})}{P(\text{test-positive})}$$

The concept of “prior probability” is crucial to understanding statistics. If we throw in some values, it becomes a little more obvious how this works. Let's use an HIV test for example. What is the probability someone actually has HIV, given that they test positive? We’d write that as P(HIV | test-positive), which we can calculate using Bayes' Theorem.

$$P(\text{HIV} \mid \text{test-positive}) = \frac{P(\text{test-positive} \mid \text{HIV}) * P(\text{HIV})}{P(\text{test-positive})}$$

According to Wikipedia[40], the probability of a false-negative test result is 0.003, meaning probability of a positive test result given that someone has HIV is 0.997. The prior probability of having HIV in the US is 0.0038[41], and the prior probability of a positive result is equal to the true positive rate plus the false positive rate, which is 0.0038 + 0.0004 = 0.0042. Plugging that into our equation, we find that

$$P(\text{HIV} \mid \text{test-positive}) = \frac{P(\text{test-positive} \mid \text{HIV}) * P(\text{HIV})}{P(\text{test-positive})} = \frac{0.997 * 0.0038}{0.0042} = 0.902$$

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[40] https://en.wikipedia.org/wiki/Diagnosis_of_HIV/AIDS#Accuracy_of_HIV_testing

[41] http://1.usa.gov/1Lee0gZ

So the probability that someone actually has HIV given that they test positive is only 90%, which might seem lower than your intuition given the low numbers for false positives and false negatives. The key is that the prior probability of HIV is so low, even though 99.7% of people with HIV test positive, the number of people with HIV given a positive test isn't nearly as high.

Bayes' Theorem isn't intuitive, but neither is the universe. The actual mechanics of Bayes' Theorem isn't as useful as the high-level insight it provides as to what it means to hold a belief, and how we can utilize evidence to improve our beliefs over time. Our instincts about statistics and probabilities are so incredibly fallacious that we must disregard them completely if we are to act rationally. Just look at the gambling industry if you need any proof. Billions upon billions of dollars are handed away each year because people don't understand the odds (or don't understand how to act "appropriately" given the odds). If your goal is to maximize profits in a casino, the only rational choice is to not play (or own the casino).

Evidence

Watch video 9 – Evidence [3 min][42]

Bayes' Theorem helps us update our beliefs when we find new evidence, but what constitutes good evidence? There are a few key factors we can consider when evaluating new information, the most important being replication. Good evidence will reveal itself over and over again, by different people using different methods.

Ancient people began to suspect the Earth was round as they watched ships disappear over the horizon hull-first, every single time. When a ship returned, the mast and sails were always the first to be sighted. This theory was tested with a variety of methods, like measuring the length of a shadow cast by a stick at two different places at the same time. On a flat Earth, two identical rods will cast the same shadow no matter where they are. But if the surface is curved, then the shadows will fall at different lengths, because the sun will strike at different angles. Even more evidence came from the circular shadow the Earth casts on the moon during a lunar eclipse. When something's true, it's always true, and the evidence will mount on only one side of the scales.

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[42] https://youtu.be/CSKhMc_jxlA?list=PLEA4C2E279C965AC4

Counter-Example

A single counterexample is enough to disprove any proposition. If someone claims that all odd numbers are prime, all you have to do is show them a 9. If someone proposes that old dogs can't learn new tricks, teach one old dog a new trick and you've disproved their claim. This is a really handy tool for quickly evaluating a new theory. When you're introduced to a claim, instead of considering whether it's reasonable, or fits with what you know, just scan for a single counter-example. If you find one, you can throw that proposition away. If you don't, then you can start to consider adopting that belief, provided there is ample evidence.

Anecdotal "Evidence"

Anecdotal evidence hardly deserves its second word. Witness testimony is just about the most unreliable piece of information you can obtain. People just can't be trusted to relay good evidence, not because they are consciously trying to mislead you (although that happens too), but because "our senses are fallible and our assumptions can be faulty". And worse, thanks to the cognitive biases I mentioned before, they may have made a type I error, and now their brains have already started conforming their perceptions to what they believe. People often truly believe things that turn out to be false. Again, we have to compensate by being skeptical. A story is just that, a story.

Systems

Watch video 10 – Systems [5 min][43]

Our next class of tools helps us understand how parts interact to form a whole. A system is a type of abstraction that not only simplifies the underlying reality, but also captures the way in which the pieces interact with one another to form a whole that is more than the sum of its parts.

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[43] https://youtu.be/_DbQcxzU-jw?list=PLEA4C2E279C965AC4

Every part is a whole, and every whole is a part. The hard part to thinking about systems is recognizing all the different levels we can look at. We can see a neuron as a system, composed of many different molecules, all interacting as a coherent unit to achieve some function. Then we could zoom out a level to see a whole brain, which is clearly a system of its own, composed of a hundred billion neurons interacting to give the illusion of a single, conscious actor. We can even go a step higher, and look at an economic system comprised of millions or billions of these brains interacting to form a whole that is much more than the sum of its parts.

Once we see all these different systems, we can start to ask how are they similar, and how are they different? We can ignore scale, and wonder about the structure between the parts of each system. There are a lot of distinctions we can make, but I'll just highlight some that I've found most helpful.

Linear vs Nonlinear

Without getting too bogged down in the mathematical details, a linear system is one where a given series of inputs will always produce the same output, no matter what order they arrive in. Imagine receiving a series of instructions telling you which way to move. "North 3 steps, East 4, South 1, East 2, North 2, West 7". It doesn't matter which order you receive the instructions in, you will always end up 1 step West and 4 steps North of where you started. These systems usually manifest themselves in applications where you assume each part is interchangeable. If every screw is the same, it doesn't matter which one comes next.

A nonlinear system is any system that doesn't have this property, where the order of inputs matters. Most natural systems are nonlinear, take a human body for instance. Let's say we filled our pantry with all the food and water we would need to survive a month. The order in which we consume those inputs matters a lot. If we drank all our water before we ate any of the food, we would either die sooner of water poisoning or later due to dehydration.

This is an important distinction because of its relation to predictability. Linear systems are very predictable. We humans understand linear systems. We can construct long, intricate assembly lines to build very complex things, because each individual part is interchangeable. We can control water pressure and build internal combustion engines and transfer information through cables, because it doesn't matter which water droplet, or which gasoline molecule, or which electron comes first.

Nonlinear systems are unpredictable by their very nature. You can't "engineer" a solution to a nonlinear problem, the way you can with a linear system. A nonlinear system cannot be reduced into a set of quantifiable inputs, processes and outputs. These systems behave in an entirely different manner, and the consequences of actions can't be accurately predicted. Systems like an economy, or an ecosystem, or the weather, have to be understood in light of this fundamental property of nonlinearity.

Top-Down vs Bottom-Up

Watch video 11 – Top-Down vs Bottom-Up [3 min][44]

Many systems we're familiar with are hierarchical, meaning orders flow from the top-down. The nodes in these systems are arranged in a pyramidal structure such that one is "above" its subordinates, and "below" its superiors. A modern corporation, or a government, or a military unit can be seen as hierarchical system. A general gives commands to a colonel who gives orders to a major, who is superior to his captains, each of whom leads lieutenants, and so on down the chain of command. Orders flow from the top-down so that relatively few actors at the top control the behavior of the entire system.

In contrast to top-down hierarchy is the idea of emergent order from the bottom-up. In these systems, nodes are connected to one another in a mutually beneficial, voluntary arrangement. Networks like this can achieve "spontaneous order", or "self-organize" in such a way that they can be more efficient, sustainable, and scalable, than top-down hierarchies. We can see bottom-up order emerge in ant colonies, flocks of birds, schools of fish, the internet, our languages, and a free market economy (if only one existed). Information and decision-making is distributed throughout the system, and order emerges spontaneously from the interaction of individual nodes.

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[44] https://youtu.be/vGVxUXdnpHo?list=PLEA4C2E279C965AC4

Isomorphisms

Watch video 12 – Isomorphisms [5 min][45]

I wrote a long post called Isomorphisms, Formal Systems and Gödel's Incompleteness Theorem where I wrote in depth about this tool, and how it can help us understand the fundamental limitations of knowledge expressed in Gödel's Incompleteness Theorem. I'm copying the Isomorphism section here: I think the best way to try and understand really complex things is to use isomorphisms. An isomorphism is a relationship between two systems that preserves the structure among the parts of each system. As Douglas Hofstadter put it,

> *"The word 'isomorphism' applies when two complex structures can be mapped onto each other, in such a way that to each part of one structure there is a corresponding part in the other structure, where 'corresponding' means that the two parts play similar roles in their respective structures."*

A school of fish and a flock of birds are isomorphic: they are both nonlinear, bottom-up systems made up of individual animals, from which emerges a "super-entity" when they work together in close groups.

Brains and Societies

The most interesting and helpful isomorphism I've discovered is the "structure-preserving relationship" between our brains and our societies. We can learn a lot about society by studying brains, and vice versa. These two nonlinear, bottom-up systems are structured in an incredibly similar way, and we can exploit this to better understand each of them. Both systems are networks composed of individual 'nodes' (people/neurons) which transfer symbols between themselves. The connections in both systems are dynamic, meaning the connections between nodes change as time progresses. You meet and communicate with different people on a daily basis, and neurons continually adjust their synapses. There are a variety of symbols transferred between nodes in both systems. In human societies, the symbols transferred between nodes are embedded in the way we position our bodies (body language), patterns of air pressure (speech), marks made using contrasting colors (writing), pieces of cloth with some of those marks on them (currency), certain elements (gold and silver), voltage carried on a wire (computer bits), electromagnetic radiation (wireless computer bits), the arrangement of colors displayed either on physical media (a painting) or electronically (TV/computer image), etc. We've learned to exchange symbols in a many different patterns, and through this exchange emerge our societies. Neurons also use many different forms of communication: dopamine, serotonin, oxytocin, acetylcholine, epinephrine, norepinephrine, histamine and many others. And out of all of this neural symbol exchange, we emerge. We are our neural society.

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[45] https://youtu.be/ryvXu4q-2_w?list=PLEA4C2E279C965AC4

While the physical substrate that encodes symbols in brains and societies are very different, the overall structure of the systems are amazingly analogous. We can imagine both our brains and societies as giant graphs where each node is an individual (human/neuron) and each edge is a connection between individuals along which communication takes place.

By drawing analogies between complex structures, we can learn more about one system, say flocks of birds, by learning about its counterpart, schools of fish. We could learn how the individual actions taken by fish, and the feedback between them, results in the emergence of collective action, and we can then apply this knowledge to flock-dynamics. We're finding a general pattern of interaction that can be applied to many different concepts. Isomorphisms grant us the ability to learn about structure rather than content. They let us learn about patterns instead of particulars. By discovering and investigating isomorphisms, we can leverage our understanding of different concepts by applying knowledge of one system to other analogous structures.

Perspectives

Watch video 13 – Perspectives [4 mins][46]

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[46] https://youtu.be/YXnMjPDfddA?list=PLEA4C2E279C965AC4

These are the lenses through which we see the world, shaping our beliefs and actions. The same underlying reality can look very different through a new perspective. The ability to see from multiple perspectives allows us to find our mistakes, and reshape our beliefs to be more consistent with Reality. We can practice shifting our perspective in all sorts of different directions.

One of my favorites is zooming-in and out, trying to imagine the universe at every scale. We can also try to see from different spatial perspectives, like trying to visualize a city from above, or thinking about where the moon is in relation to the Earth and the Sun just by looking at its current phase. Or we can practice seeing slices through time, like imagining the history of a tree from its modern form, or picturing the evolution of Homo Sapiens from Life's common ancestor.

Of course, the most useful tool is being able to see through the lens of another self, from another human's perspective. We can ask ourselves: What would I believe if I was a Roman citizen? If I was born in an Islamic country, would I be Muslim? How would I feel about Communism if I was raised in the Soviet Union? Is this really normal, or does it just seem normal to me? Some of the hardest perspectives to take are the ones that have no observer, like trying to walk a mile in someone else's shoes when there are no shoes to walk in.

The Anthropic Principle

Watch video 14 – The Anthropic Principle [3 min][47]

This idea generally relates to the notion that the Universe was "fine-tuned" for life. The fundamental forces in the Universe seem to be set arbitrarily to certain values, and if any of these had been changed, the Universe would have developed very differently. In many of these hypothetical universes, galaxies might never have formed, or even atoms. How lucky then are we, to be born into a universe with just the right conditions for life? But to fully evaluate that claim, we have to imagine a universe where life didn’t evolve. In a universe with different fundamental laws, where galaxies never formed, there would be no stars, and no planets orbiting them, and no beings to look up and marvel at how the Universe was fine-tuned for life. In the hypothetical universes where there is no life, there is no one there to report it. Only in a universe where intelligent life develops can a being question its own creation. So it’s not surprising at all that we find ourselves in a universe conducive to life.

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[47] https://youtu.be/pkVtn1M9o9A?list=PLEA4C2E279C965AC4

The Discontinuity of Self

Watch video 15 – The Discontinuity of Self [8 min][48]

I also wrote a (shorter) post solely addressing this point, The Discontinuity of Self, and I again plagiarized some of my younger-self’s writing (I’m sure he won’t mind).

An even harder perspective to take is one in which we are an illusion. Our own perspective is so pervasive and convincing, so mind-numbingly obvious that it can be difficult to doubt its veracity. But appearances can be deceiving, and the only rational explanation is that the self isn’t continuous, that our identity emerges anew every instant of every day. We’re so accustomed to our personal point-of-view that we grow to believe it is constant. But the self is a lens through which we see the universe, and it is perpetually shifting. The image only seems constant because the change is generally so gradual. Once we let go of the illusion of continuity and focus on the changes, we can start to see how our selves emerge from underlying processes.

Our identities are constructed by a vast collection of neural networks all working simultaneously. The way we act, the choices we make, the beliefs we form, are the high-level, external projections of a nonlinear system of neural interaction. We’re like the operating system of a highly parallel computer. We are formed by the physical operations of our internal hardware. An operating system is an abstraction that emerges from operations on single bits, and the self is an abstraction that emerges from the operations of individual neurons. We can think of our outward behavior and actions as the image that appears on the computer monitor, a way for the system to interact with the outside world. What shows up on the screen is the result of a coordinated effort by the CPU, RAM, motherboard, OS and hard drive. The image on the monitor can change gradually, giving the illusion of continuity within the system. But at least 60 times a second, each individual pixel is refreshed based on the calculations performed within the machine. It may appear as one congruent form, but that is simply an illusion.

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[48] https://youtu.be/cfYVffA279w?list=PLEA4C2E279C965AC4

Our behaviors, beliefs, and being emerge anew based on the current pattern of neural communication in our heads. Any semblance of continuity is merely an illusion. This isn't just some semantic debate about the word 'self'. The implications for the way we live are enormous.

Understanding that we aren't the same person as before relieves us of our guilt. It wasn't you that made those mistakes. It was your younger self, someone without all the knowledge and experience you have today. (Most importantly, the younger version is missing the knowledge of how that mistake played out.) Who's to say how you (the you in your body right now) would have handled that situation if you were there? The only thing we can do is learn from those memories. We can't change the past, and there's no point feeling bad about things we can't change. When you realize that's the very best you can do at this point, it actually feels good to recognize the error and move on. You're now a better person because of it, and the self that made the mistake is long gone. Granted, this perspective isn't natural and it can be hard to achieve. But it is rational, and with practice we can learn to let go. Like overcoming fear, we have to simulate our desired reactions before we can integrate them into our selves.

Recognizing that we only exist right now can also be extremely liberating. Focusing exclusively on experiencing the moment can bring about enjoyable and enlightening mental states. Many forms of meditation involve the practitioner trying to become aware solely of their immediate perceptions, allowing thoughts, memories, feelings, and sometimes the entire sense of self, to wash past them. Experiences like that can give us great insight into what we really are, a brief peek behind the curtain, beyond the illusion of self. We can learn a lot from Buddha on the subject, but of course,

"Believe nothing, no matter where you read it, or who said it, no

matter if I have said it, unless it agrees with your own reason and your own common sense.” **– Buddha**

Most helpful of all, recognizing our discontinuous selves can help us shed our fear of death. You will never die. The person in your body right now has no reason to fear death. Some other poor sap wearing your shoes in the future will get to experience that. And since you can’t do anything about it now, there’s no point worrying about it. Worrying about death before it’s happening is the only way it can have a negative effect on your life. We can leave our body’s later inhabitants to deal with the bitter end.

The same goes for anything that will happen in the future that we can’t do anything about right now. After a certain amount of preparation, you can’t change how you’re going to respond in a job interview. You might as well leave your future self to deal with it. After enough studying, you can’t do much to affect your performance on a test. Leave the worrying for the person who takes it. Anything we’re dreading is really a chore for a later version of you, so there’s no point feeling bad about it now. Your future self is going to have to deal with it regardless, don’t let it burden your current self as well. There are, of course, plenty of situations where we can put our future self in a better position. Practice today will make us better tomorrow. But if the self is discontinuous, and it’s not me who’s better off tomorrow, why should I bother?

Pay it Forward

Watch video 16 – Pay it Forward [2 min][49]

The attitude we take with regards to our future selves affects our experience in the present. We can only live in this moment, but much of our happiness depends on the actions of our past self. I might be the one who takes a vacation, but it was only because my younger version saved up the money. So then, the real question isn’t “what should I do to make myself happy now?”, it’s “what attitude should I adopt so that each of my selves can be happiest?”

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[49] https://youtu.be/ykTJPuHcb94?list=PLEA4C2E279C965AC4

In a lot of cases, the answer to that question is to defer gratification. In general, the longer you wait, the better off the eventual reward. And if we always take that attitude, then eventually we'll get to be the self that benefits from waiting. If throughout our lives we constantly defer gratification, then throughout our lives we will receive greater rewards than had we always pursued happiness in the moment. This principle is exemplified in the famous Marshmallow Test.

The Marshmallow Experiment – Instant Gratification [5 min][50]

The incredible thing about this experiment was its ability to predict future success. The first follow-up study, in 1988, showed that "preschool children who delayed gratification longer in the self-imposed delay paradigm, were described more than 10 years later by their parents as adolescents who were significantly more competent". A second follow-up study, in 1990, showed that the ability to delay gratification also correlated with higher SAT scores. A 2011 study of the same participants indicates that the characteristic remains with the person for life. Additionally, brain imaging showed key differences between the two groups in two areas: the prefrontal cortex (more active in high delayers) and the ventral striatum (an area linked to addictions). Counter-intuitively, deferred gratification is a useful tool for being happier in the present.

The Selfish Meme

Watch video 17 – The Selfish Meme [8 min][51]

There's one more perspective I'd like to talk about, and that's through the eyes of an idea.

"A 'meme' is "an idea, behavior or style that spreads from person to

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[50] http://youtu.be/Yo4WF3cSd9Q

[51] https://youtu.be/TMdxwNpkbC8?list=PLEA4C2E279C965AC4

person within a culture." A meme acts as a unit for carrying cultural ideas, symbols or practices, which can be transmitted from one mind to another through writing, speech, gestures, rituals or other imitable phenomena. Memes as cultural analogues to genes in that they self-replicate, mutate and respond to selective pressures." ***– Wikipedia***

Like a gene, it's hard to define the borders of a meme. Ideas aren't exactly discrete units, although we can reason about them as if they were. And like genes, we can imagine ideas to be selfish-replicators, concerned solely with passing themselves on. Of course, memes don't really think that way. They don't think at all. But if you look at the behavior of memes, they appear to behave selfishly; they appear to want to spread themselves. Much like a gene or a virus appears to want to spread itself. Obviously these entities have no emotions. These are abstractions we use to simplify the physical world. A virus doesn't want to replicate any more than a toilet wants to refill itself after flushing. But the viruses that are best at replicating become the most common viruses.

You never hear about the viruses that don't replicate very well, because they didn't replicate enough to get recognized. In the same way, you never hear about the ideas that don't replicate, because ideas have to replicate for you to hear them. Metaphysical solipsism, the assertion that no reality exists outside one's own mind, isn't a household word because no one tries to spread it. It's a self-defeating meme. If you believe it, you don't bother telling anyone. Evangelicalism, on the other hand, is a great replicator-meme. Belief in the idea leads people to want to spread belief in the idea. Memes can also spread via biological reproduction, the passing of an idea to one's children. All else being equal, a belief that encourages large families is more likely to spread than one that encourages small families.

A good replicator-meme can quickly go viral, and spread across large regions, forming an evolutionarily stable strategy- a strategy that, once adopted by a large population, cannot be invaded by any alternative strategy that is initially rare. Memes have another interesting property, and that's the potential for immortality. Like genes, memes can be passed on from generation to generation with little or no change in content. An idea can persist for millennia, even if it's not true (again evidenced by religion). Once we've disregarded the illusion of a continuous self, maybe we can replace it with something better: an ecosystem of memes.

Watch video 18 – An Ecosystem of Memes [4 min][52]

"I was always open to the possibility that the meme might one day be developed into a proper hypothesis of the human mind. I did not know, before I read Consciousness Explained and Darwin's Dangerous Idea by Daniel Dennett and then Susan Blackmore's new book, The Meme Machine, how ambitious such a thesis might turn out to be. Dennett vividly evokes the image of the mind as a seething hotbed of memes. He even goes so far as to defend the hypothesis that "human consciousness is itself a huge complex of memes…"

When the meme began, in The Selfish Gene in 1976, the message was a negative one: genes aren't the only pebbles on the Darwinian beach. In 1998, in Unweaving the Rainbow, I could be more positive: "There is an ecology of memes, a tropical rainforest of memes, a termite mound of memes. Memes don't only leap from mind to mind by imitation, in culture. That is just the easily visible tip of the iceberg. They also thrive, multiply and compete within our minds. When we announce to the world a good idea, who knows what subconscious quasi-Darwinian selection has gone on behind the scenes inside our heads? Our minds are invaded by memes, as ancient bacteria invaded our ancestors' cells and became mitochondria. Cheshire Cat-like, memes merge into our minds, even become our minds."

– Richard Dawkins

Recognizing our memetic selves gives us a tantalizing opportunity: partial immortality. If we are a collection of memes, and memes can live as long as they replicate from person to person, then pieces of ourselves have the opportunity to live forever. As long as we transmit ourselves into the future, hopping from body to body in the form of ideas, we will never die.

Shorthanded – *Feb 26, 2012*

Went out for a cruise yesterday with just Sean and myself, my first time sailing with only one crew-mate and it turned out rather easy in the light winds. We took the same basic route as my last voyage, headed NE about an hour, dropped anchor and made some sandwiches. I got in my kayak and paddled around the boat, took some 3rd-person pictures of Sovereignty at anchor for the first time. The launching procedure must have looked funny from afar; I tied a halyard through the back of the kayak and raised it up the mast, then pushed it over the side to lower it into the water. It worked better than expected, and I was able to bring the tender back aboard without any help. I also got us from anchor back to the marina completely single-handed, which was a great learning experience.

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[52] https://youtu.be/GCjuwk4GZso?list=PLEA4C2E279C965AC4

All-Nighter – *Feb 28, 2012*

Couldn't sleep last night so I pulled an all-nighter, then had my most productive day ever on the boat: converted my natural gas grill/oven to propane and replaced a broken water pump. Hooray, running water and non-microwaved meals!

Feedback – *Mar 4, 2012*

The 2nd law of thermodynamics is a crazy thing to fathom. It can be stated about a thousand different ways, like “No process is possible whose sole result is the transfer of heat from a body of lower temperature to a body of higher temperature” or “No process is possible in which the sole result is the absorption of heat from a reservoir and its complete conversion into work”; but my favorite is:

The total entropy of the universe never decreases.

Entropy is an expression of disorder, or “randomness”, or the relative absence of information or patterns. It’s easy to see different levels of entropy in the different phases of water. Ice is made up of water molecules in a very ordered state, whereas water vapor is made up of water molecules in a very disordered state. Molecules in a snowflake form an ordered crystal lattice, while the molecules in a cloud bounce around without much of a pattern. So if the entropy of the universe never decreases, why are there snowflakes? How can you get patterns in a universe where entropy always increases? Shouldn’t the universe be a sea of disordered matter?

The answer is feedback. Feedback occurs when the output from some process influences future inputs. It’s a loop or cycle that allows a system to exhibit some means of control upon itself. Feedback is how we get complexity in a universe where entropy always increases. Even in a universe constantly moving from a more-ordered to less-ordered state, there can be a chain of events that happens by chance to increase its own chance of happening again. Some events, some processes, some phenomenon, act like replicators. They output the ingredients for themselves. We can see it in the snowflake: once water molecules are moving slow enough, they don't have the momentum to escape the electromagnetic forces of their neighbors, and they form stable hydrogen bonds. Being tetrahedral, water molecules tend to tessellate when they stick together. Their forces are spread out into a shape that tends to form hexagons, over and over.

So once you get an ice crystal going, it acts like flypaper for slow moving water molecules still in the cloud. The fast moving water vapor molecules can bounce right off the crystal, but the slow movers get assimilated. They fall into position on the surface, and become the new front-line of glue. So at low enough temperatures, this self-replicating event occurs and water is added in the same pattern, over and over again, building up the snowflake. And from this feedback loop, complexity emerges.

But why does everything look ordered? Complexity isn't exactly rare, it surrounds us. Just about everything we've got a word for is a complex pattern, from atoms to galaxies. Why should that be the case if the entropy of the universe is always increasing? The answer is once again feedback. Processes that tend to replicate themselves tend to stick around longer than usual. By their very nature of making themselves happen again, they keep making themselves happen again and again. They can form stable patterns in the universe, little whirlpools in the sea of disorder that loop back on themselves, continuing their own existence. These things survive long enough to deserve names.

And since these patterns continue their own existence, over time, there gets to be a lot of them. Stable patterns can form in the stable patterns of other stable patterns. A hexagonal crystal lattice can form in the hydrogen bonds of water molecules. The feedback between subatomic particles can form a pattern we call an atom, which stick together in molecules within the planets of a star system in a galaxy. These feedback loops can build upon each other to astronomical proportions, creating us, and the complex cosmos we inhabit.

What's true in the physical realm is also true of our abstract human interactions. Most of our encounters are random, and they are quickly forgotten. But occasionally, we form feedback loops. Much like water in a snowflake, we can fall into a pattern of behavior and stick to it. These actions can form complex systems that perpetuate their own existence long enough to deserve names. Families, businesses, cities, governments; these patterns of interaction tend to make themselves more likely to happen again in the future. And because of that property, they tend to stick around. Groups can form from simple interactions between members and grow into colossal complex systems, all because of feedback. And none of this breaks the second law of thermodynamics.

Who's Writing This? – *Mar 8, 2012*

I've written quite a bit about how the self is discontinuous, meaning our identities are in a constant state of gradual change, and we're a different person every single day. But the self is also fragmented, meaning it's composed of different parts that all work together to produce our thoughts and actions. Once we acknowledge that, we might start to wonder, "Where am I?" Which parts am I aware of? Which parts do I control? Because clearly our brains are doing far more than what we experience consciously.

This problem becomes clear to me when I start writing. Who's choosing these words? What about the letters? I'm certainly not consciously choosing to move each of my fingers on the keyboard. Somewhere between the high level idea and the keystrokes, my conscious thoughts are converted into unconscious action. And I think it's much higher up than just the character selection. I think a great deal of what is posted on this site isn't the result of a conscious decision on my part. A great deal of it seems to be unconscious.

But where should we draw the line? Or is there a line to be drawn? I'm gonna start speculating here, but this is what seems to be happening: My unconscious creative neural networks gets inspired by something, and start generating tons and tons of words and phrases. I don't think I'm responsible for that. Where my consciousness comes into play is in selecting and revising that language. I think I reside in the error-checking department. When I'm writing, words just seem to spill out. They come in waves, and sometimes I do consciously influence the starting point, but for the most part I'm just riding the coattails of the other parts of my brain. What I do is read and re-read, listening to the words and trying again if they don't sound right. I'm not the author, I'm the editor.

The difference between writing and speaking [1 min video][53]

First Overnight Anchor *– Mar 14, 2012*

I finally got my first glimpse of life as a full-time cruiser, and erased any doubts I had about spending my days on the water. My good friend Benjamin Gilliam and I set out Wednesday for Redfish Island, a nice protected anchorage just a few miles from Clear Lake. We got a late start in the afternoon, motored out past Kemah and raised the sails. We were sailing SE against the wind so we had to perform a series of tacks to make any headway, and as the sun began to set after a couple hours of sailing we furled the sails and motored the rest of the way. We pulled into Redfish and dropped anchor a couple hundred yards from another sailboat that was already situated there. The sun was fading fast, but we decided to fish for a bit and kayak to the island in the dark. It's a man-made breakwater constructed from large rocks, dredged material and broken shells with an elevation of two feet above sea level. There wasn't much to see, so we kayaked back before long. We approached our neighbor vessel but no one was on deck, and we didn't want to knock on the hull so we never met them. We raised the kayak up the mast and swung it back on deck, then went below for dinner and sleep. It was a rather restless night for both of us. There were decent waves, and since it was my first time anchoring overnight I wasn't sure of the anchor's holding strength. We both woke up several times to check our position, but a dense fog surrounded us. The only thing I could see was the anchor light from our sister ship, and thankfully it was always the same distance away. In the morning I pulled up the anchor, and realized I had no reason to doubt it. It took a good fifteen minutes to get it aboard out of the resistant mud below us. We sailed home with the wind at our backs, making great time and rarely changing the sail's position. As we approached the Kemah boardwalk, we took down the sails and motored the rest of the way to my marina.

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[53] http://youtu.be/Rp0tqwgEgUQ

Photo Album[54]

GPS track[55]

First Extended Cruise – *Mar 22, 2012*

About an hour after Ben left from my first overnight anchor, my longtime friend Andrew Byrd and my brother Grant arrived at my marina. After stocking up at Walmart, we headed back to Redfish Island for the first night of our cruise. We faced similar winds and again had to change directions many times to work our way upwind. We dropped sails as we neared the “barn” and “silo”, two decrepit oil platforms that serve as waypoints to Redfish. We motored in and set the anchor. We had a different neighbor that night, but again we never met them. We didn’t get out in the kayak this time, just ate some delicious hamburgers Grant prepared and watched some shows on a laptop before bed.

The next morning we had breakfast tacos and set out for Galveston. We were again sailing SE against the prevailing winds, and for a while we were caught in a narrow passage between shallow ground and the busy ship channel so we were tacking every few minutes. We finally found a break in the traffic and crossed the channel into a large area of open water where we could sail for about an hour each direction up wind before having to turn. Most of the day was spent like this, not doing a whole lot until we needed to turn, and the other guys took naps while I manned the helm. In the late afternoon we approached Galveston, and consulted our chart to help navigate the busy intersection of the Galveston Ship Channel and the Intracoastal Waterway. We turned down the Intracoastal and headed for a known anchorage near Pelican Island. There was a worrisome minute as I tried to pass a barge on the right, only to find my keel start to drag in the shallow mud. I floored the throttle and threw the wheel over, quickly returning us to deeper water. After that, we found our way to the anchorage rather easily. Once situated off Pelican Island, we discovered my fridge wasn’t working and we were almost out of ice. I decided to paddle to shore in the kayak and hike to the nearest road to buy some ice from a grocery store. It was a good 20 minute paddle to land, although it looked a lot farther when I set out. I hid the kayak and set out through a marsh that I soon discovered to be the A&M Galveston Wetlands Center. Wading through ankle-deep water and waist-high brush, I finally made it to the road and hopped a barbed-wire fence. I found a Valero just across the street, bought the ice and set out for the return trip. This time I followed the road until I found the actual entrance to the Wetlands Center, and followed an easy path back to my kayak. I paddled back, filled up the ice chest and took a cold shower with a gallon of freshwater before we cooked dinner and went to bed.

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[54] http://imgur.com/a/Vo193

[55] http://i.imgur.com/Je0jEnd.png

After digging out the anchor and starting up the engine on day 3, I decided I wanted to at least see the Gulf before we headed back. We motored back out the Intracoastal and SE down the ship channel, avoiding all the big ships, barges and ferries at the busy intersection. We made it out to marker #11, not quite at the end of the jetty but enough to taste the ocean before turning around. With the wind behind us, we “flew” back (for a wind-powered vehicle, it was still about 10 times slower than driving) and rarely had to change sail positions. As we neared Kemah about 4 hours later, we witnessed a sailing race in the bay which provided an interesting show. They made our tacks and heeling (the angle the boat leans at) look like child’s play, but we were never in much of a hurry. We again took down the sails as we passed the Boardwalk, and motored back to my marina. What an adventure.

Video clips [2 min][56] GPS track[57] Photo Album[58]

A Personified Economy – *Mar 27, 2012*

A human trying to understand an economy is like a neuron pondering a brain. The behavior of a brain (ie your behavior) is determined by the interactions of its neurons, which are driven by the internal states of each individual neuron. In exactly the same way, the behavior of an economy is determined by the interactions of its humans, which are driven by the internal states, or beliefs, of each individual human.

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[56] http://youtu.be/qFGtMmYv4aM

[57] http://i.imgur.com/tSu4y6e.png

[58] http://imgur.com/a/ecUCH

We'll never understand the economy in its totality because our understanding of it, our model of it, is a piece of the economy that would have to be understood and modeled. But then you would have to model that model, since it is now a part of the economy. And then you'd have to model that model… (If you had a nearly complete understanding of how all humans interact, wouldn't you behave differently than you do now with your incomplete knowledge? To completely understand the economy, you would have to create a new model to account for that new behavior. But that new model would probably again change your behavior, which you would also have to model…) giving us an infinite regression.

Like Godel's Incompleteness Theorem shows us, you can never prove all the truths entailed by a formal system from within that formal system. You can never completely model and predict an economy from within the economy. The best we can hope for is a good abstraction, a close analogy, a useful allegory for what's really going on. And for that, I think it's helpful to personify this system, the same way it's helpful to personify the interactions of neurons in a brain (ie you). We would never say, "This sentence was typed based on the current internal states and communication between neurons in this brain." We say, "Michael Fielding typed this sentence." I am a personification of my neural networks. I'm a good abstraction of my neurons, a close analogy, a useful allegory for what's really going on. To better understand the economy, I think it makes sense to personify it, to talk about its self, the "Hive Mind", the "superorganism", the economy's identity.

When you personify something, it helps to give it a name. In one of my favorite Econtalks, Dan Klein puts forth this idea and suggests the name 'Joy' for the economy, so I'll follow his lead. We're neurons in Joy's brain.

Klein on Knowledge and Coordination [1 hr podcast][59]

So how does the allegory help us? It lets us put the economy, this massive, complex, incomprehensible network, into human terms. We can barely begin to fathom the economy as it is, but we're much better at understanding our selves. By using this isomorphism, we can translate something that's very complicated into something a little less complicated (or at least, better understood). I love trying to imagine how Joy is similar to us, and how she might be different.

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[59] http://www.econtalk.org/archives/2011/12/klein_on_knowle.html

Right off the bat, we can see that sometimes Joy gets sick, just like we do. Joy can have mental diseases like addiction, exactly like a human brain. Money plays the same role in Joy as dopamine does within our own brains, and it can be artificially released with money printing just like dopamine can be artificially released with drug use. Joy can experience euphoria and depression, booms and busts. We share a lot in common with Joy. Which makes me wonder, how real is Joy? Is she conscious? Does she think? Does an economy know it exists? Can it doubt its own existence like we can, and realize cogito ergo sum? These ideas probably seem preposterous, but so would your existence if you asked a neuron.

If Joy is a thinking being, could we ever communicate with her? Even if we can't, we can surely get some sense of her health. Right now, Joy is very sick. She's addicted to debt-money, and unfortunately it looks like the currency will have to collapse before she can start to feel better. Maybe after this paradigm shift, we can start to think about Joy in our everyday economic exchanges. We can ask ourselves, "What would Joy do?" Will this make Joy happy? If we're going to worship some entity, to praise some personified "higher power", to use it for moral guidance, I think it should be Joy, our collective consciousness, the embodiment of our collective beliefs and actions.

Government "Schools" *– Mar 28, 2012*

I don't think they deserve to be called "schools". "Labor camp" fits better. I know people don't like to use words for what they mean, but let's break down the definition and see if it fits.

A labor camp is a simplified detention facility where inmates are forced to engage in penal labor. Children are kept in schools whether they want to be there or not, so it's clearly a detention facility. (They even call the punishment of being held there longer 'detention'.) Students aren't free to leave so they're obviously inmates (a person confined to an institution).

They’re forced to engage in penal labor (unpaid labor conducted by prisoners) and if they refuse they are punished (generally by being detained longer in detention). Just yesterday I saw a young teacher on Facebook say that if her students don’t do the work she assigns, she punishes them with detention. And she thought she was helping them!

A Galactic Brain – *Mar 28, 2012*

I love thinking about the isomorphism between brains and economies, where neurons:brain::brains:economy, and I think the natural next question is: can we take this idea even further? Can we find an even larger structure that maintains this relationship? When we moved up a level, the whole system became just a node in a larger network. The big, complicated, intricate system of neurons communicating became just a single node in our economy, a network of brains communicating. Can we repeat this formula and find an even higher-level network? I think we can, and it might tell us something about where the universe is headed. If we make our global economy into a neuron of the next system, then a big collection of global economies all communicating with each other could form a galactic brain.

The numbers make sense. There are about 100 billion neurons in a human brain. Our global economy has about 7 billion brains. The Milky Way galaxy has a few hundred billion stars. Considering the vast differences in scale possible in the universe, it’s astounding that these numbers are so close. That means it’s possible for a scale invariant network that requires about a billion nodes to develop at every level.

We have to assume that life is common, that many planets in our galaxy will develop life, and a good portion of those will develop intelligent life, and many of those will form global economies that function like a brain. If those living, thinking planets start communicating with one another, it makes sense to assume they’ll follow a similar pattern to human neurons and human brains. As they communicate more and more, they’ll begin to specialize and trade, simply because any system that specializes and trades is more efficient than individuals working on their own. It’s the path of least resistance, the most efficient way to organize a network.

Neurons communicate with electrical and chemical symbols, brains communicate via all sorts of different symbolic mediums like patterns of air pressure (speech) or contrasting marks (writing), and I’d think living planets would communicate with symbolic patterns of electromagnetic waves, just like we humans do with radios.

Every time we move up a level, we also slow down. Joy, our personified economy, thinks very slowly. Where neurons communicate on the order of 10 to 100 symbol exchanges per second, we humans communicate much less frequently. Just like the neurons, we have bursts of exchanges (generally called conversations), but spend longer periods in between these firings. So what would happen at the galactic scale? It doesn't look like there's any way around the light speed barrier for information transfer, so living planets will have to communicate on the order of years or centuries (or longer). But that's not necessarily a problem. Living planets think slowly, and so it's natural for them to communicate slowly as well.

What will they talk about? The neurons communicate with each other based on their internal state, and the input the receive from their neighbors and their environment. So do we humans, and I'm sure living planets would be no different. They'll talk about what they know and what they see.

Why haven't we heard anything? This is the biggest question in my book, and might mean that thinking planets are rarer than I've assumed. The best answer I've come up with is that we're early. We might be one of the first thinking planets in our neighborhood. It takes a few generations of stars exploding to form the heavy elements we're made of, and there have only been a few generations of stars so far in the Milky Way. Maybe we don't have to worry about super-advanced beings conquering us, maybe we'll be the super-advanced beings that contact younger systems in a couple thousand years. Or maybe the messages just haven't got to us yet. We're about 25,000 light years from the galactic center, and we've only been listening for about a century. Maybe some sentient beings sent out a message 20,000 years ago and we just haven't received it yet. Who knows. But I think we can make a guess about where this is going.

Even if intelligent life is rare, self-replicating process tend to keep replicating and spreading. Eventually, after billions of years, life will spread throughout the galaxy. And those lifeforms will communicate with each other. Just like a relatively small group of humans spread across the globe and started communicating with one another, forming a collective consciousness, I think the same process will happen on the galactic scale. Once planets start specializing and trading (they don't have to trade matter, just information), they will form a similar system to a human brain or a human economy. I think eventually, thinking planets will form the neurons in a galactic brain.

Let's Have Religion Without Faith *– Mar 30, 2012*

Religions are great in many ways. They bring people together, encourage them to do good, explore history and philosophy, contain rich metaphors and symbolism, ritualize important activities, cultivate a sense of purpose, and tell wonderful stories. But like governments, they suffer from a fundamental flaw. Most religions are based on an invalid assumption: that faith is beneficial.

(I better define what I mean by 'faith', because that word has a lot of meanings. I'm talking about beliefs that are not based on evidence or reason. I better also make it clear that I'm not talking about any tenet of any religion. You can believe in God without faith. In fact, I've never met anyone who believed in God who couldn't cite reasons why they believed.)

It's hard to use logic to defeat faith. People have faith in faith. How can you use reason to talk someone out of a belief that's not based on reason? I can tell people how dangerous it is, how it provides an on-ramp to a roundabout of circular reasoning that prevents you from seeing the truth, and we could easily be trapped with a false belief. Or I could remind people that beliefs drive behavior. We take particular actions because we believe they will have particular results, and if we want to achieve our goals, we have to hold beliefs that are consistent with Reality. I could even use Pascal's wager, point out the risk that we'll suffer in the afterlife by having the wrong beliefs, and we need some way of discerning whether ours are correct. But none of those would work, because they're based on reason.

The only way I could convince people not to use faith is to show them that they already aren't using faith. Everyone bases their beliefs on evidence and reason, whether they're aware of it or not. It might not always be good evidence or good reasons, but they're always there. Generally it's trust in someone they love. Or a personal experience that can't be explained. Or the desire to be a member of a community, or a need for moral principles. Or possibly it's historical evidence, or appreciation of an ethical framework. Maybe people have metaphorical beliefs and enjoy the symbols. Lots of people like believing for the rituals. Many more believe because it gives their lives purpose. And some narratives are so well told that people want to believe they're true. But in each of these cases, there is a reason people believe.

No one believes because of faith, but people will often cite faith as the reason they believe. I hope you can see the distinction. People always form a belief for a reason, consciously or unconsciously. But once the belief is formed, faith adds support. Faith is a superficial pillar, a cheap facade hiding the truth, concealing the real reasons behind the belief. It's safe, it's easy, it's passive, it's lazy. It's for people who are afraid to look in the mirror, who don't want to know themselves. But only the truth can set you free.

Brushing With Your Non-dominant Hand – *Mar 30, 2012*

I've been brushing my teeth with my left hand for almost a decade now, and I think it's been really helpful for a number of reasons, least of which is actually training the fine motor controls of my left hand (although that's nice too).

I think the most helpful aspect has been reinforcing a particular attitude: the drive to be better, and more importantly, the ability to take steps to accomplish that goal. It doesn't really matter what activity you choose, so long as it's not easy and it takes conscious effort to accomplish it. By repeating that process over and over, your brain learns how to face a hard problem, which can then be translated to the real world where we face difficult situations every day.

It also helps to practice delayed gratification. It takes a lot longer to brush your teeth with your off-hand, especially at first. Forcing yourself to take the longer, harder road helps train your brain to put off happiness in the moment so you can be even happier in the future. It's not fun struggling with what seems like a pointless exercise, but it is fun to reap the rewards of that struggle later on down the line. Counter-intuitively, deferred gratification is a useful tool for being happier in the present.

The great thing about brushing with your non-dominant hand is it's one of the easiest ways in the world to practice all of these skills, but the benefits extend far beyond the bathroom. You take an extra 30 seconds brushing your teeth, and then it becomes easier to wait that extra year to buy a car so you don't have to go into debt. Or you struggle for a minute getting your hand to move the right way, and then you pick up golfing and find it’s much easier to put in the effort to improve your swing. It’s a simple way to practice the cognitive strategies that can make our lives better.

Chapter 2

Adolescence at Anchor

Started Living at Anchor – *Apr 2, 2012*

I decided to say goodbye to Marina del Sol and start living "on the hook". I want to get a good month of practice before I leave, and the slip fee was just draining my remaining money anyway.

According to my map, the north side of Clear Lake varies between 4 and 6 feet, which is a dangerous place to anchor considering Sovereignty draws 5'2". The night before I left, I spent a few hours kayaking around the lake in the dark, using a lead weight on a string to measure the depth and find a stretch of water where I would be safe.

So far everything's gone better than expected, mostly thanks to the Kemah Boardwalk. I can dock for free temporarily, walk over to Starbucks and get free wifi, and I moved my truck under the Kemah bridge where there's free public parking. Now my only expenses are food and diesel, and my 30hp engine only uses about a quart an hour. I filled up in September and still have half a tank (plus a 5 gallon reserve tank in case that fuel gauge isn't working).

I already learned an invaluable lesson- keep a backup battery charged. I bought solar panels but haven't finished installing them yet, so in the mean time I'm relying on my diesel engine to charge my batteries. One night I was docked at the Boardwalk, but went to crank my engine and it just barely turned over, wouldn't fire. This was before I moved my truck, so I had to walk/jog 4 miles all the way back to Marina del Sol to drive it over near my boat, pulled out a marine battery and charged it off my truck. I let the engine run for a few hours to charge all the batteries, then pulled one out to save as a dedicated backup.

Other than that everything's been awesome. I love anchoring in Clear Lake at night, I found a nice little spot that's deep enough and clear of the channel. Spent the past few days just going back and forth between anchor and Kemah, and yesterday I went out for my first single-handed sail.

First Single-handed Sail – *Apr 6, 2012*

I went out for my first single-handed sail yesterday, and everything went great. It was a beautiful day for it. I left from the Kemah Boardwalk, motored out the Clear Lake channel and put the sails up. I left the engine idling, aimed on a broad reach and set the wheel-lock. Then I ran up on deck and raised the mainsail. Hopped back in the cockpit, unfurled the jib, and killed the engine. It was pretty easy with yesterday's calm winds.

First Single-handed Sail [40 sec video][60]

8 to Redfish – *Apr 9, 2012*

Took out the biggest group yet and had a ton of fun sailing to Redfish Island. Me, Sean Magin, Daniel Fuqua, Aziz Khalil, Sean Delval, Marc Ferris, Jared Salas, and Julian Ferguson. We left from the Kemah Boardwalk around 10am and sailed upwind to the island, tacking every hour or so until we got close and dropped the sails to motor in. There were about 30 other boats there when we arrived, the most I'd ever seen. We dropped anchor near the South end of the island and strung up a rope swing to jump in to the cool water. Jared and I paddled to the island and walked around for a minute, there isn't much to see so we came right back. We dropped a crab trap with some lunch meat in it but had no luck. Chilled there for a few hours and headed back with the wind behind us, making great time. The guys treated me to dinner afterward at Sam's Boat, I got a delicious fish sandwich and they left me with tons of leftover snacks (thanks guys!). It was a pretty awesome day, incredible weather, no problems and lots of fun.

The Structure of Education – *Apr 23, 2012*

The most powerful lessons are often unspoken. We learn a lot more from people's actions than their words. Which makes perfect sense- language only developed in the past million years, possibly even as short as 100,000 years ago. But our ancestors have been learning by watching each others' behavior since long before we developed a common tongue, and long before we achieved the level of consciousness we have today.

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[60] https://youtu.be/Ic3NZf6GmHo

The big problem with formal schooling is that students learn more from its structure than its content. We learn much more from the implicit information embedded in the format of our schools than what we are verbally taught. The scary part is, we absorb and accept those implied instructions much easier than something we're told, because it's harder to consciously identify and reject them.

Whether intentional or not (and it's almost certainly intentional), children are being taught some disturbing things in school. They're not said out loud, they're not in the textbooks, or on the homework assignments or tested on exams. It's in the structure of the system.

So I'll tell you the structural lessons I think I've identified, but I'll admit it's hard to say exactly how they affect students because they're not openly discussed. The key point is that structure matters more than content; I'll give you some examples but you should look at the structure of the system and try to reach your own conclusions. People can argue all day about whether Intelligent Design should be taught, but no one even considers whether teachers should be choosing topics to begin with, or whether students should be graded, or if they should be divided into age groups, or whether they should be required to attend, or whether they should adhere to a dress code, or any of the thousands of assumptions built into the structure of education schooling.

The biggest structural problem I see is who decides what is taught. Representatives and administrators choose the topics, teachers create their lesson plans, and students are expected to learn what the teacher decides. Students have very, very little say in their education, especially at the young end, but really all the way through college- you make a few choices at the beginning of the semester (if you're lucky enough to have flexibility in your degree plan) and then you're forced to follow the professor's bidding. So people learn that their interests are irrelevant, that someone else knows what they need to know better than they do, that they should shut up and do what they're told.

That's an assumption I'm skeptical of. I don't think anyone knows what the next generation needs to know. I don't think anyone ever has or ever will, and without a doubt, no group of elected representatives has a clue. We just aren't smart enough to make predictions about our economy 20 years into the future. So why should adults choose what children learn about?

The generic response is: "If adults didn't force children to study math or history, they would just play video games instead." So what? If that's what the next generation wants to do, that's what they should do. Why do people think knowledge of math or history is more important than knowledge of the maps in Call of Duty? If the next generation is happy playing video games, then we should restructure society so more video games can be played. I highly doubt that's all kids would choose to do, but the whole point of education should be to help people make themselves happy. We have to understand what makes them happy before we can even begin figure out what knowledge could help them on their quest.

Next, formal education turns school into a game, complete with grades and rankings. Guess what- when you structure something like a game, people play it like a game. At least for me, school was never about learning. That just wasn't even part of the equation, it was completely irrelevant to the task at hand. School was only about getting a high score, and you don't have to learn to do that. In fact, it wasn't even about getting a high score, it was about getting a good grade while expending minimal effort. I remember making a mathematical formula for it in high school (with help from Andrew Byrd). Performance = Grade/(Time-Invested)^2. Obviously this isn't an appropriate attitude for learning, but that's what happens when you structure education like a game. So it shouldn't be at all surprising that people cheat and cram and procrastinate and bullshit, because that's how you win.

We're taught that knowledge is obtained from authority. Supposedly the teachers know all the solutions; every problem can be answered by referring to the back of the book or the teacher's manual. The structure of the system cultivates a God Complex in each of us.

Tim Harford: Trial, error and the God complex[61]

Even worse are the fears instilled by the current paradigm. Schools require the direct submission of students to the adults around them, using all the silly threats that work on children (uh oh, Timmy has to sign the book, or move his name into the yellow- ooooOOOOoooo). We're taught to be passive, docile, easily manipulated- to respect and fear authority. And if the punishments aren't enough, they'll drug you until you can follow orders.

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[61] http://youtu.be/K5wCfYujRdE

We're judged constantly, trained to look to others for approval, to seek praise from authority figures. Any deviation from the norm is immediately stamped out- no mustaches, no short skirts, no tank tops, no colored hair, and don't you dare untuck your shirt in the holy sanctuary of an elementary school. We're made to conform, and to fear standing out.

The list goes on and on. Whether or not you agree with the problems I pointed out, hopefully you can see how the structure of the system influences the minds of children, and we need to be careful what kids are learning from the situations we put them in.

Dr. Derek Cabrera – How Thinking Works [16 min video][62]

Solar Panels – *May 3, 2012*

At anchor, I needed to generate my own electricity. I bought two 100 watt solar panels on eBay and had them delivered to my friends Nick and Steph in Houston. On my last day in the marina, my dad helped me install pressure treated 2x4's on the Bimini bars over the cockpit. Sovereignty came with these stainless steel bimini bars intended for a sun shade, but no fabric bimini cover, so I decided to use them for the solar panels.

Installing Solar Panels at Anchor [1 min video][63]

To mount the 2x4's, we clamped two together at a time and drilled a 1" hole down the gap, so each side had a .5" radius semi-circle. The Bimini bars fit snugly in the semi-circles, and we used 1" U-bolts to hold the wood tight against the bars. Then I drilled holes through the wood to match the pre-drilled holes in the panels, and tightened them down the nuts and bolts.

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[62] https://youtu.be/dUqRTWCdXt4

[63] https://youtu.be/SlR0DHNmMeo

I didn't actually install the panels onto the 2x4's until I was at anchor, using a bootstrapping process based on the diesel engine. I used the engine to turn the alternator to keep the batteries charged to run the inverter which powered a drill that I used to cut holes in the 2x4's. The 1500 watt inverter just barely powered the drill. If I pulled the trigger too fast, it would draw too much current and the inverter would reset with an annoying "beep-beep-beep". I had to pull lightly and slowly spin the drill up to speed to make it work.

The whole contraption looked like it might fall off at any second, but it actually had a nice mix of strength and flexibility. I was worried about adding all that weight above my head, and concerned it might catch too much wind, but after the first few storms I gained confidence it would hold together.

Storm on Clear Lake – *May 11, 2012*

Severe storm on Clear Lake tonight. I'm anchored in my usual spot N of the channel about half a mile in. Tonight, another sailboat anchored about 400 yards to my SW. As the storm gets heavier and heavier, rain, wind and lightning increasing in intensity, I decide to go above deck (naked) to double check everything. As I did, I notice my neighbor vessel looks closer than when we had been earlier. I go below to look for my keys, in case I should need to start the engine, but couldn't find them and returned above deck. The sailboat is closer once more. Now getting frantic, I go below and look again but still can't find them. I grab my flashlight and air horn. Now the boat is right on top of me, maybe 100 feet away. I blow the horn, and hear over the wind “Ahoy, matey. Is that you dragging or me?” I scream back “You're moving, not me!” I'd been watching the shore lights to make sure. I thought for sure she would hit me. The wind was blowing her straight at me. I yell again “You're moving, not me!” She swings around and misses me by about 30 feet. It looked like her anchor line had broke. I saw the sailboat anchored farther downwind the next day, and she appeared undamaged, but it was quite a scary experience.

Photo Album[64]

First Crab Dinner – *May 13, 2012*

Photo Album[65]

Quick Update – *May 23, 2012*

It's been a while. I've been pretty busy with installing various parts, taking lots of friends out for farewell sails, getting the crew moved aboard, fixing engine issues and I haven't had very consistent internet access.

It's been great having so many friends come out that past couple weeks. I think I'm up to 34 visitors now, thank you all for coming I've had a lot of fun.

Photo Album[66]

The Crew – *May 23, 2012*

The crew moved aboard on Monday: Daniel, Sean, Tyler, and Julian. More than I was thinking at first but I think it might actually work out better, we'll be able to sleep in shifts, keep someone on watch at all times, share the costs of the voyage and divide up the chores.

Sean, Tyler and Julian arrived together Monday evening, we got their stuff aboard and went out to Clear Lake to anchor for the night. Dan finally got to Kemah around 2am so we set out to pick him up. Motoring back I got caught in shallow water (it was low tide) and the keel got stuck in the mud. After trying to dislodge it with the propeller, the engine was running hot (and had been for a while), so I took a look below and discovered the belt had broken. The belt runs both the alternator that charges the batteries and the coolant pump, so after turning off the engine and replacing the belt the batteries were too low to crank the engine.

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[64] http://imgur.com/a/kPuOS

[65] http://imgur.com/gallery/fDZNo

[66] http://imgur.com/a/YhgiO

So I pulled 2 batteries from the engine compartment and loaded them up in my kayak. I sat in the rear, and Sovereignty's two marine batteries were in the front seat with some jumper cables, wrapped in a tarp to keep them dry. I paddled them over to Kemah where Dan was parked (about a 45 min trip). We charged them off his car for about an hour, then both paddled back out to the boat in Clear Lake. We climbed back aboard just before sunrise. I was soaked. The batteries took my usual spot so I was huddled on the front of the kayak, forcing it to nose dive and letting the waves splash me. I installed the batteries and the engine cranked right up. The tide had risen, and with the engine repaired I was able to bust out of the mud. We motored to the Kemah Boardwalk and we’ve been testing it, finalizing the move and getting organized since then.

We’ll stay around Clear Lake through Sunday to continue testing the engine and getting settled. We’ll take our practice sail next week to Freeport and back, and assuming everything checks out we’ll plan on saying our final farewells the following weekend (June 2/3).

Day 2 & 3 – *May 24, 2012*

After the first night’s excitement we stayed docked at Kemah until I could figure out the overheating problem. I had already replaced the belt the first night, but when I ran the engine the following morning it was still heating up too fast, and the exhaust water was cold when it should have been hot. I added oil and coolant and ran it several times to no avail. I was beginning to think something might be wrong with the heat exchanger, possibly from sand clogging a hose when I got stuck. I was starting to worry about how much time and money this problem would take to fix, but I didn’t want to rush into taking the engine apart. I’ve encountered many problems over the years that just kind of solved themselves, and I didn’t want to start fixing this until I was sure it was really broken. So I continued running the engine for short periods while monitoring the temperature and exhaust water.

I read that revving the engine can sometimes dislodge small blockages, so I tried that several times. Lo and behold I felt hot water coming out the exhaust pipe (good thing). I left the engine running and the temperature never rose above the normal range. Kept testing it, running at higher and higher RPM's for several hours. The exhaust water kept getting hotter while the engine temperature stayed low- success! After enough time and checks I gained confidence in the engine and we headed out to actually sail for the first time as a group.

It felt so great putting those sail up. We'd been cooped up motionless along the Kemah Boardwalk for too long. The breeze was a wonderful relief. Strong winds out of the SSW, we were able to sail a beam reach (perpendicular to the wind) to Redfish Island in record time, even with the mainsail reefed to reduce wind exposure. Julian steered us out there and held us heeled (leaning) at 30° most of the way, keeping us near top speed (~8 mph).

We anchored about 6:30pm, some of the guys got out to swim. The water's a great temperature right now but the strong winds made it cold when you climbed back aboard. I cooked up a dank stew- 3 lbs of pork, potatoes, onions, mushrooms, butter and all kinds of seasoning. I sat outside while the musicians (Dan, Tyler and Sean) jammed for a while out in the cockpit, then went below to try and catch some shut eye.

Didn't sleep much last night either. Heavy winds and waves kept me worrying about the anchor and rode. I woke up often to check our position. After a scary incident in Clear Lake when another sailboat anchored upwind of me drifted loose in a storm, I didn't want to take any chances getting blown into the lee (downwind) shore. Luckily my concern was in vain and the anchor held tight all night. One of my shrouds (steel wire tensioners beside the mast) blew loose this morning, but it was only the cotter pin that came undone so I quickly reattached it.

Daniel sailed us downwind from Redfish this morning making great time again with the strong winds using only the main sail. We docked at Kemah, I went to my old marina and took my first real shower in weeks, Dan, Sean, and Julian went back to Katy for a few days and we're going to try again for a practice trip to Freeport starting Monday morning.

Another Fantastic Sail *– May 27, 2012*

I took my parents out today and we had a great time on Galveston Bay. Pretty strong winds so we only put the mainsail up, and decent waves but my mom handled it like a champ. No beer because of stupid laws preventing a Sunday morning purchase but we had fun anyway. Fried chicken for lunch, and got a real close encounter with a pod of dolphins. All in all a great day.

PS. I'm going to try and make a post with all my recent sails, sorry I haven't been posting them but they're all pretty similar to this or the trip to Redfish Island. I'm guessing I'm up to around 30 day sails and maybe 10 overnighters (not counting my usual anchorage in Clear Lake).

24 Hours *– May 31, 2012*

Sean, Daniel and Tyler arrived in Kemah about 2:00PM on May 28, ready to start our practice trip to Freeport and back. After getting intensely seasick on the last sail, Julian thought a month or more of being nauseous didn't sound like a whole lot of fun, and decided to give up his spot on the crew. We picked up a few things at the store, and bought a backup handheld VHF radio. I had been requesting radio checks from my built in radio without receiving any replies, so it was a great relief when we got back to the boat and heard my radio check through the new handheld. We motored out of Kemah about 3:30, raised the sails and started heading East towards the ship channel.

We held a starboard tack for a couple hours, making good progress with the strong Southerly wind. We crossed the ship channel, and continued East for a while until we saw shallow water markers up ahead forcing us to tack. We came about, and headed SW for another long stretch.

Had one really scary encounter with some unmarked pilings that rose just 6 inches out of the water. Didn't even see them until we passed just a few feet to port. After that we kept an ever sharper lookout; they could have easily damaged my hull.

Eventually we made our way close to Texas City, and since the sun was setting we anchored about a quarter mile downwind from shore. Nice night. We cooked up a beef stew with potatoes, carrots, onions, mushrooms, and spices.

I woke up about 6:30 the next morning and got us started toward Galveston. Pulled up the anchor and raised the mainsail. We were headed SE, but felt a bump beneath the boat after about an hour. Then another, then a few more as we slowed to a stop. The keel was dragging bottom. Turned on the engine, and shifted from forward to reverse a few times to try and work our way out. About 15 minutes of that and a gust of wind heeled over Sovereignty, reducing our depth and freeing us from the shoal. We made our way to the channel and rode it the rest of the way.

As we approached the intersection of the Houston Ship Channel and the Texas City Ship Channel, I turned on the engine in case we needed it to quickly get out of 596 the way of a big ship.

We ran the engine for about an hour with no problems, turned it off for a little while when there were no ships around, then tried to turn it back on as we approached the intersection of the HSC and the Intracoastal Waterway. It cranked hard, but wouldn't stay running. Meaning some kind of fuel problem.

We had plenty of diesel, just added 5 gallons the day before. It could be the fuel lines, or maybe the fuel filter was clogged. I decided to turn us around and head back for Kemah to do the repairs there. We sailed downwind, made the trip back in about 3 hours. Anchored a few hundred yards south of channel marker 5 where we could spend the night and make repairs, and close enough to Kemah to paddle the kayak to our cars.

I was basically out of cash, and I knew I might need some liquid money for parts or repairs, so I decided to sell an ounce of gold, keep some of the cash and buy some silver with the extra. Sean decided he'd like to buy some silver coins too, so we made the 30 minute paddle to shore, loaded the kayak in the back of my truck and headed towards Houston.

It was 3:30. 24 hours since we left. We ran our errands, and paddled back to the boat as the sun set.

So Close yet So Far – *May 31, 2012*

After the first 24 hours of our "practice trip" we were anchored just outside the Kemah channel, about half a mile from the Kemah Boardwalk. Sean and I had already made one kayak paddle round-trip to visit a coin shop and buy other groceries, an exhausting sub-adventure.

We chilled the rest of that night and decided to work on the engine the next day.

Slept in late Wednesday morning, my first decent night in a while.

Figured we weren't going anywhere anyway so there was no point waking up early. It was another hot one, and I didn't feel mechanically inclined for a while, so we swam and kayaked around till late afternoon.

Daniel and Sean made another kayak voyage to shore for food and supplies. The wind was blowing a little harder as they made the trip back after a couple hours, so they had to fight the waves and current. They boarded Sovereignty soaking wet, but bearing fruits of Chick-fil-a sandwiches.

I knew the problem was somehow related to fuel, because the engine was cranking hard and sounded like it was about to start, but wouldn't. I figured I'd bleed the fuel line and try it, but the bleed screw sheared in half when I tried to unscrew it. So now I knew I had to go to shore to replace at least that one part. I removed the whole fuel filter assembly to bring with me, and figured I should replace the filter while I was at it anyway.

By that time it was already getting close to sunset, so I decided to wake up with the sun Thursday and paddle in to Kemah early.

Woke up about 6:30, gathered my stuff, paddled to shore and loaded the kayak in the back of my truck right at 7:30. Got some McDonald's and went to Blackburn's marine supply store. They redirected me to Lakewood Yacht Service where I replaced that bleed screw and bought a new fuel filter. Parked my truck back under the Hwy 146 bridge, launched the kayak and paddled back out to the boat by about 10:30.

The guys were just getting up as I raised the kayak back on board. I installed the new filter, bled the lines and the engine started right up! What a rewarding sound. I let the diesel run a while just to be safe before we raised anchor and motored back over to the Kemah Boardwalk. The guys decided to go back to Katy for the weekend, then we'll have a Bon Voyage party at my old marina on Sunday, then shove off for good (hopefully) early Monday morning. We figured if anything else goes wrong we can always turn around and come back, but if everything's working we might as well start the journey towards Florida and beyond before hurricane season gets any stronger.

Anyone who wants to make the drive out to Clear Lake is welcome to join us for the Bon Voyage party. We're starting up at 2, and we'll get some pizza's delivered around 5, and you can stay as late as you want. BYOB. We'll be hanging out by the pool and bathhouse on the right side as you turn into the marina parking lot.

Chapter 3

Eastbound and Down

Clear Lake to Galveston *– Jun 6, 2012*

Lifted anchor about 9:00am from our anchorage in Clear Lake and motored under the bridge and past Kemah, out to Galveston Bay and eventually the Houston Ship Channel. We tried raising the sails but barely made any progress with the light winds. We were going slow enough that Daniel and I got out and swam alongside the boat for a bit. We turned the engine back on to make some headway, and sailed again later in the afternoon once the winds had picked up. We tacked back and forth across the ship channel until we neared Galveston, then furled the sails to motor down the Intracoastal Waterway. I veered a little too far right in a large gap between channel markers and got stuck again. A big pod of dolphins surrounded us as I worked us out of the mud, spinning right and left until we found our way to the freedom of deeper waters. We continued west and passed under the causeway bridge which is lowered for trains to use. I contacted the bridge via VHF radio channel 16 to be sure we were clear to pass, and after receiving clearance we motored beneath it. Just another quarter mile and we turned into a channel leading to Offatts Bayou, where my good friend Karlsen let us stay docked for the night. We spoiled ourselves with warm showers and air conditioning, and a stew cooked in a real kitchen. We'll be staying here one more night while we wait for my backup GPS to come in the mail, then we'll set sail for Sabine Pass on the border of Texas and Louisiana.

Photo Album[67] Sunset [1 min video][68] GPS Track[69]

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[67] http://imgur.com/a/xLPjg

[68] https://youtu.be/bhK4DkxC5oU

[69] http://i.imgur.com/s7SyjQv.png

Railroad Bridge Closed till 17:00 – *Jun 7, 2012*

Motored out of Offatt’s Bayou this morning and into the ICW only to find the railroad bridge was lowered making passage impossible. Contacted the bridge via radio only to learn it wouldn’t open till 17:00. Turned around, docked at a bait shop to stock up on mullet, beer and ice, then hung out for a couple hours. Headed back out now, we’ll probably anchor near Pelican Island for the night.

Eastbound – *Jun 9, 2012*

Finally we’re headed East. I mentioned to Tyler that this might have been the best day of my life so far. The Intracoastal Waterway is gorgeous. A quiet channel enclosed by grasslands. We motored the first few hours because we were headed upwind and there’s no room to tack, but then the ICW curved and allowed us to raise sails. Crawling along, soaking in the sights without the rumble of an engine is just about the most peaceful thing I can imagine.

Photo Album[70]

Lake Charles, Louisiana – *Jun 12, 2012*

Been having the time of my life. This journey’s been even better than I had imagined. Getting to see so many incredible sights, breathing fresh air, meeting interesting people; don’t think it could have gone any better.

After finally leaving Offatts Bayou we anchored off Pelican Island, in almost the same spot I anchored with Byrd and Grant some three months ago. Feels more like a year. We traveled eastbound on the Intracoastal Waterway the whole next day and into the night before we reached Sabine.

We’re getting pretty comfortable communicating with ships via VHF radio. In narrow channels we’ll talk to the other captains when we’re passing or being overtaken, and agree to pass either “on the 1” or “on the 2”. We hear a lot of “meet you on the one, skipper”, meaning we’ll be passing an oncoming ship port-to-port.

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[70] http://imgur.com/a/tiDMj

We ran into a storm at night on the ICW, pulled over to the side of the channel and anchored until it passed. I stayed up top in rain gear to watch for barges, and had to talk to a couple captains via radio as they passed. One recommended moving a little farther East to a safer anchorage, but by the time we pulled up anchor the storm had passed so we just kept on trucking. Sean motored us a long time that night, keeping a sharp eye out for barges. One popped into focus just a few hundred feet in front of us, a good reminder to keep our eyes peeled. We anchored in Sabine Lake about 2:30am, and just hung out the next day to catch up on rest, swim and clean up the boat a little.

After that we headed out into the Gulf (finally!). We picked the best day for it- nice smooth SE winds, partly cloudy and a nice temperature once the boat was moving. We hove-to in the afternoon and got out and swam in the clear green water. It was an incredible change from the murky brown we became accustomed to in Galveston Bay. I could actually see my rudder as I climbed up the swim ladder on the stern.

Made it to Calcasieu Pass as the sun was setting and got escorted inland by a huge pod of dolphins. There must have been 40 of them, all around the boat. Charging us head-on, riding alongside, some just a few feet from the boat. As it got darker we followed the navigational markers to anchor just north of Monkey Island. It was a pretty good little anchorage, well protected from the South winds with deep water right up next to the bank.

The next morning we sailed North up the Calcasieu River all the way to Lake Charles, about a 35 nautical mile journey. I'm loving sailing the rivers and channels where I can get a good long look at everything. There's so much to see in this world, I wouldn't want to go much faster than our average speed of 6 mph. A South wind pushed us all the way North so we barely had to touch the motor, made the trip in 7 or 8 hours and arrived in Lake Charles about 5pm.

We docked at the municipal marina for free, and immediately met the owners of the only other boat in the marina- Jeff and Irene on Down Under. A super nice retired couple on a 40-something foot motor yacht. They live near Lake Charles and motor their boat over to the marina every weekend. Jeff's an Australian with a thick accent, but he settled in the US after he fell for an American girl.

He gave us a ride to MacFarlane's Celtic Pub in his jeep where we got our first real meal in a long time, and sampled a nice variety of beers. Walked around for a while after that and ended up in a bar called Twiggy's. It was almost empty, but we got to talking with the bartender Chris Bird and found we had a mutual friend from Katy. Drank there a bit, played some foosball, and then headed across the street to Walgreens to save some money by buying a case. Talked to the cashier "L-Ray" for a while and told him all about our adventure.

After that we started heading back to the boat when a white SUV pulled over across the street from us, and a shirtless, tatted-up dude strolled over to mess with us. He asked what was in the beer box, and saw an upside-down beer inside. He pulled it out and asked if we'd ever drank an upside-down beer, trying to get one of us to chug it. The guy had Nazi tattoos and was acting real sketchy, so we didn't know what he was trying to do. After a couple minutes Dan just chugged the beer he was holding to get him to leave, and he finally walked back to the car and took off. Weird. Immediately after we were stopped by a cop. We hadn't broken any laws; he just checked our ID's and listened to our story before admitting his jealousy and letting us keep walking.

Yesterday we ate Wendy's for lunch, walked to a coffee shop called Stellar Beans and talked for a long time with the barista Taylor. She was a really interesting girl, gave us all kinds of advice about places to go in Lake Charles and New Orleans. She said they get travelers coming through all the time, but we were the first she had met going by boat.

After that Dan and Tyler took a taxi to pick up supplies, and Sean and I went over to the Civic Center to use their free wifi. Then we hit the Happy Hippie for pizza. We had met Bill the owner at Twiggy's last night and he said he would "hook us up". Bill came through, the pizza's were awesome and he gave us a couple shots on the house, a sample of his specialty brisket, plus a $5 gift card for the next time we come. If you're ever in Lake Charles you should definitely check it out. No TV's though, so we left the Happy Hippie and went around the corner to Luna's to watch the basketball game.

Today we planned on heading out early, but looks like it's really gonna be 2 or 3 before we head out. We wanted to upload some pictures from Stellar Beans, but before we left the marina we met a soft spoken old sailor with endless stories to tell. He told us of his sailing days, his job bartending in

Antarctica with the Air Force where he would heat up the beers rather than chill them, and was really excited about our boat and stories. We talked for about 30 minutes before we finally parted ways and walked to the coffee shop. Talked some more with Taylor and met the manager Danita who had to check out our maps to see where we've been and where we're going.

Going to travel the ICW for a day, then pop back into the Gulf for another day if the weather's nice, then back up the ICW to New Orleans later this week.

New Orleans – *Jun 23, 2012*

Hard to believe it's only been 5 days since we left Lake Charles. It feels like a month. So many new experiences filling everyday, ups and downs, problems and solutions. We're living in fast forward. And all the sights- just about indescribable. Every turn down the ICW I see something I've never seen before.

Photo Album[71]

After leaving Lake Charles around 2pm, we made our way back to the Intracoastal Waterway and continued eastbound through the night. It's pretty easy to stay centered in the canal, the only thing you have to worry about is avoiding barge traffic, and that's not really hard either. At night we can see their lights coming a mile away, and they'll often call us on VHF channel 13 to negotiate the passing.

We got out into Vermillion Bay about an hour after sunrise, and made our way through the Southwest Pass out to the Gulf for another day sail. We raised the sails for a while, but weak winds left us pretty much motionless. I hopped out and swam to fight the heat while we sat there, but eventually we furled the sails and motored toward the Atchafalaya river.

The channel entrance juts way out into the gulf, about 20 nautical miles offshore, and cuts through the shallow waters of Atchafalaya Bay. We had hoped to get into the channel before dark, but the hour or so we tried to sail without wind set us back and we had to find it in the dark. It wasn't too bad, we got into the channel easily using the flashing navigational lights, but we had a little trouble staying inside for the first half hour. Somehow we got pointed at the wrong red light, and headed out of the channel for a little while until we recognized the mistake and headed back. We were still out in deep water though so it wasn't a problem, but that same mistake closer to shore could have caused trouble. The winds had picked up at this point and came from the South East, so we raised the main to help push us inland. Eventually there were no other lights besides the channel markers, and we followed a Christmas colored landing strip all the way to land.

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[71] http://imgur.com/a/2h6MA

Sunrise on the Atchafalaya was gorgeous. We continued northbound around the twists and turns towards Morgan City where the river intersects the ICW. Sleep deprivation was starting to become an issue for me. I took the night shifts, but struggled to sleep during the day, and the few times I fell asleep got interrupted to communicate with a passing ship or choose which fork on the water we needed to take.

June 15 was a scenic but otherwise uneventful day on the ICW, but. Just east of Lake Salvador and north of Lafitte, we ran out of gas. We had been running low, and added our 5 gallons of reserve early that morning, but motoring through our gulf sail day had set us back. I was asleep in the cockpit with Sean at the helm when he woke me. We coasted to the side of the canal and dropped anchor while we tried to figure out what to do. Alerted barges via radio to our situation, and watched them push their mammoth loads by us just a few yards away.

The captain informed us that we were just a hundred yards from a public boat launch and dock, and a quarter mile from a gas station. We launched the kayak and I paddled to shore with our 5 gallon reserve tank. The Lucky Mart wasn't so lucky though and didn't sell diesel, so I paddled back and tied up the kayak to the stern to pull it closer to shore while a barge passed. Once we were clear, we tied up the kayak to the bow and towed Sovereignty over to the dock. It actually went pretty easy, only took 30 minutes or so, and most of that was wasted getting stuck and unstuck on the side of the channel. We couldn't get all the way next to the dock because the water was too shallow, but we tied up about 15 feet away with the keel just resting on the bottom to keep us secure. After the ordeal, we passed out and I got my first decent sleep since Lake Charles.

Woke up about 9 or 10 the next day while the local sheriffs were launching their boat. Tyler got to talking with them and explained our situation, and they offered to take him to a nearby fuel dock to fill up our tank. The fuel station ended up giving him 5 gallons for free, brought him back and we poured it in. The engine wouldn't start though since we had ran it dry, so I had to bleed the fuel line to get the air out and she started right up. Took us a minute to break free from the muddy bottom, but soon we were back on our way.

Resumed our trip eastbound on the ICW until we came to a draw bridge. Hailed them on 13 only to find out it was out for maintenance for the next few weeks. Pulled a 180 and headed back towards an alternate route 5 miles back. Followed that all the way to the Mississippi River, but had to wait like 2 hours to get through the Algiers Lock.

We entered the Mississippi right at sunset, catching a beautiful picture of New Orleans painted pink and orange. Headed upriver past a bunch of ships and barges and turned into Inner Harbor Navigational Channel, also known as the Industrial Canal. It's a mile of water guarded by a lock and crisscrossed with lift bridges, and it must have taken us four hours to hail all the operators and obtain passage.

We were headed to a fuel dock on Lake Pontchartrain to fill up, but the Danziger Bridge operator informed us that the lock to the lake was closed. Luckily there was a shipyard and marina right on the Industrial Canal that didn't come up on the map, so we docked there for the night. Starving and itching to stretch our legs, we walked 2 and a half miles to a 24 hour donut shop and grill. Got some pretty great chicken strips and pretty bad beignets, then walked over to the Treasure Isle Tavern across the street.

The government's not quite as oppressive in Louisiana as Texas, and even though it was 3am we could still buy beer. Met some pretty interesting characters in the tavern: Derek the owner was really enthusiastic about our journey, and an old boater Ricky bought us some Jager shots. Got a taxi back and slept soundly at the dock.

Walked to a bus stop around noon on Sunday and got a ride down town. Bought some beer to carry around, ate lunch at Cafe Maspero where I got a real good alligator sausage po' boy, then crossed the street and watched some street dancers. Witnessed a fight during the show when some gangsta kid came and sat right in the path of a performer, then started causing trouble in the crowd. One of the performers socked him a dozen times in the head and dragged him out of there, and made it clear to the audience that he wasn't associated with the group and it wasn't part of the show.

Afterward we walked up the steps to sit on a bench overlooking the Mississippi, and after a while met this really interesting guy named Rodney Schaffer. He had lost a foot in Katrina when a tree fell through his house and broke his leg, but it didn't break his spirit. We must of sat there talking to him for like six hours, learning all about the city, his background, and the scams people pull on the street. He had fun talking to every passerby, a real easy going guy who just loved people. He became our tour guide for the night, showed us all around Bourbon St and the French Quarter while we bought him some drinks, and eventually helped us catch a cab back to the boat.

The next day we met up with Susan Jarrell, a long time family friend who now lives in Baton Rouge. She picked us up from the marina and drove us downtown took us out for lunch at Chartres House Cafe. I got crawfish stuffed catfish. Delicious. Then we walked over to Cafe du Monde for coffee and beignets while listening to a drummer and another man with the most odd looking 8 ft instrument one has ever seen. There was some jazz infusion in the background and that definitely served as a uniquely New Orleans experience. She asked us then if we had been to Pat O'Brian's for Hurricanes, and since we hadn't she took us there and bought us all one. We walked back to the car, and she drove us down St. Charles Ave to show us Tulane, Loyola and some amazing houses. Then she brought us by a grocery store so we could restock, and back to the boat before we said goodbye. Mrs. Jarrell, thank you so much for everything.

We left New Orleans early the next morning, back under some bridges on the Industrial Canal and onto the Intracoastal Waterway.

Pensacola – *Jun 23, 2012*

From New Orleans the Intracoastal Waterway winds its way out into Lake Borgne and Mississippi Sound, open water but protected from the Gulf by barrier islands. Headed upwind, we continued motoring all the way to our anchorage at Cat Island. It's a skinny piece of land occupied by one building and lots of trees. Apparently during WWII the island was used to train American family dogs to sniff out Japanese Americans, but the operation was a complete failure. Watched Shutter Island that night, figured it was appropriate.

From there we made our way to Horn Island. Winds from the SE allowed us to sail a bit, our first time in almost a week after being on the narrow ICW. The bilge had a little too much water in it and spilled out onto the floor when we heeled over, getting some oily water on our stuff. Horn island has deep water right near the beach, so we were able to get pretty close before anchoring. We decided to kayak over to the island and use a pop-up charcoal grill to cook some kabobs. It's a tandem kayak, and not wanting to make 3 trips we tried to pile 3 people on it at once. Big mistake. We flipped it after the first paddle, spilling all our supplies into Mississippi sound. Luckily most of it was in a floating bag, but Daniel and Tyler had their phones in their pockets. They were toast.

Loaded up and tried again, this time sticking to the appropriate number of paddlers. Sean and I went first, took a tarp, the grill, potatoes, sausage, onions, bell peppers, beans, water, and the handheld radio. I left Sean on the island and paddled back for the next passenger, and when I got there I heard Sean calling on the radio for the cast net and fishing poles cause he's seeing small sharks right near the shore. We load up for the trip back, but I decided to swim it to avoid the extra trip. It wasn't to bad, I alternated between freestyle and kicking on my back and got there not long after the kayak. The sun was setting quick so we collected driftwood for a fire, and lit up the charcoal grill.

We didn't have any legitimate skewers, so we splintered a piece of bamboo into strips and slid our meat and veggies onto that. Mine was delicious, I took the time to alternate my bites to get a good mix, and grilled it till the potatoes were nice and tender. Sean dropped his in the sand and got crunchy sausage.

The other guys wanted to head back and sleep on the boat, but I didn't feel like trying to gather our supplies in the dark, and really wanted the experience of sleeping on an island, so after they left I wrapped up in a sheet and slept on the tarp. It wasn't too bad, pretty hard, a little chilly, some mosquitos, but overall definitely worth the experience. Sean paddled over before sunrise and brought me back to the boat.

Started up the boat but noticed it was running really hot almost immediately. After 30 minutes of worrying and turning it off and on, I finally checked the coolant tank and saw it was almost empty. A little fresh water and she was running smooth again.

From there we hit Dauphin Island, anchored right off the Western tip. Stayed on the boat that day and Tyler cooked up a rice, pork, carrot and broccoli stew. Pretty great.

After that came a long, scenic day of motoring to Pensacola. Passed through Mobile Bay and back onto the narrow ICW we were used to. As we neared Florida the houses along the canal got nicer and nicer. We started seeing more yachts, hotels, and money all around us. Passed LuLu Buffet's restaurant and marina, started seeing white sands and soon enough entered the Sunshine State. Not far from the border we went through Big Lagoon and then entered Pensacola Bay. Fought a strong current that slowed us 2 kts, but entered the Bayou Grande marina on the Naval Air Station right about sunset.

As we pulled in we noticed a boat named Sovereign, and then Daniel met the captain on the way to the bathroom. Unbelievable. Doug Magee, a super nice retired army JAG and lawyer and his girlfriend Irene Underwood. We got to talking and he drove us out to Mullet Point, a nice local restaurant with some great live bluegrass. I got a soft shell crab sandwich, and listened to Doug talk about how he had won a Supreme Court case, Wyatt v. Cole back in 1992.

Since then we've been hanging in Pensacola. Took a taxi downtown to hit some bars, chilled at NEX, the Navy Exchange with a food court and wifi and been watching Debby closely before we move from this protected marina.

Photo Album[72]

Climbing Ropes [20 sec video][73]

Sovereignty – *Jun 24, 2012*

The name gives draw bridge and lock operators a hard time. It's pretty uncommon, tough to spell, and its meaning isn't widely understood.

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[72] http://imgur.com/a/kOl1c

[73] https://youtu.be/0hLBVWtJ9Pg

I’m doing my best to change that.

Sovereignty is freedom. It means you have no rulers. It means making your own decisions, and being responsible for their consequences. Having complete control over your actions. Not being a slave.

It’s not generally a word applied to individuals. Most of us have rulers. Most of us don’t make our own decisions. Most of us are slaves. When people use the word, they’re generally referring to sovereign states. Countries that completely control a territory, with ultimate authority over their subjects. Or popular sovereignty, the principle that “Governments derive their just powers from the consent of the governed”.

Individual sovereignty is rare. Most of us consent to government. Most of us accept our chains, even grow to love them. I’m doing my best to change that, too.

Tropical Storms and Feedback Loops – *Jun 27, 2012*

While we’re sitting here waiting for Debby to pass, it’s a good opportunity to think about how a tropical cyclone works, and to see if we can learn anything by drawing isomorphisms to other systems.

Tropical Storms

Like any complex system, a tropical cyclone forms when environmental conditions allow a positive feedback loop to emerge (it’s the only way to fight the Second Law of Thermodynamics, the tendency of the Universe to move from a more ordered to less ordered state). In this case, energy from the sun warms tropical waters and increases the amount of evaporation. When water evaporates, it requires a certain amount of energy to fuel the phase change from a liquid to a gas, called the latent heat of vaporization (or enthalpy of vaporization). As the water vapor rises into air of lower pressure, it eventually condenses back into water droplets and releases the energy back into the environment, this time called the latent heat of condensation. The energy released into the atmosphere causes the air to rise, pulling more humid air up from below, increasing the evaporation of water at the surface, creating the positive feedback loop.

Some of the energy released as the water vapor condenses is transformed into mechanical energy in the form of wind. From Bernoulli’s Principle we know that the faster a fluid moves, the lower its pressure (this is how airplane wings and sailboat sails work, the curved shape forces the air to move faster over one side, creating lift/thrust). Decreasing the pressure above the ocean results in even more evaporation, which means even more energy released in the atmosphere when that water vapor condenses, intensifying the positive feedback loop.

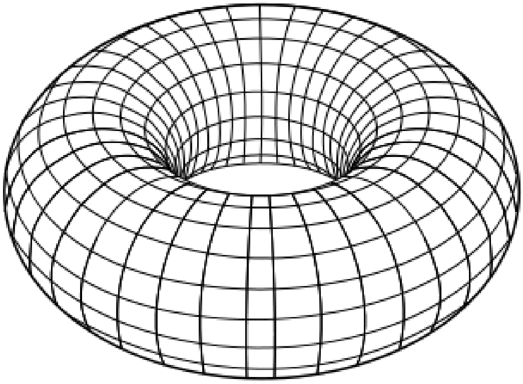
If air moved towards the center of the low pressure system in a balanced manner, straight in from each side, then the low pressure center would quickly be filled in and the cyclone wouldn't form. This is where the Coriolis Effect comes into play, and why tropical cyclones don't form on the equator. The surface of the Earth travels different speeds at different latitudes, because every latitude makes a complete circle in the same amount of time, but farther from the equator the surface has less distance to travel each day. The Earth's surface drags on the atmosphere, and since it's dragging different speeds at different latitudes, it gives the low pressure system a slight twist that starts it spinning- counter-clockwise north of the equator and clockwise to the south. This prevents the winds from rushing into the center directly and allows the system to develop into a cyclone.

As long as evaporation occurs on the surface, and wind shear through the atmosphere doesn't disrupt the rotation of the storm, the positive feedback loop continues and the cyclone gathers strength.

Feedback Loops

Tropical cyclones are fertile grounds for drawing isomorphisms to other complex systems. They're perfect examples of "stable patterns in the universe, little whirlpools in the sea of disorder that loop back on themselves, continuing their own existence."

We're most familiar with the 2 dimensional whirlpools that form on the surface of water, but in 3 dimensions they take on the shape of a torus.



It's easy to see the toroidal shape of a hurricane. And a galaxy. Or the magnetic field lines of a planet or star.

Hurricane Structure [image][74]   Earth's Magnetic Field [image][75]

I'm starting to think we can draw an isomorphism between any complex system and a torus, not always visually but in a more abstract sense of how the system works. Any complex system, no matter whether it's a cell, a human, an ecosystem, an economy, a star system or a galaxy, must contain feedback loops for the complexity to emerge. It's the only way to fight the constant flow towards disorder, the tendency of the Universe to move from a more ordered to less ordered state, the Second Law of Thermodynamics.

I like to imagine the more metaphorical, abstract torus shape of any complex system. Every complex system is based on feedback loops, and it generally takes more than one to sustain the system. So we can imagine every feedback loop for some system drawn as a circle, with arrows moving around it in one direction. If we have a bunch of these circles, each one representing a different feedback loop, we can arrange them in a circle to form a torus.

I've got a feeling this is a rich isomorphism that we could probe to some depth and apply widely, like the isomorphism between human brains and human societies, but I'm just starting to scratch the surface.

I also think it's important to pop back out from this specific picture and see how isomorphisms are such useful tools for learning in general. "Isomorphisms grant us the ability to learn about structure rather than content. They let us learn about patterns instead of particulars. By discovering and investigating isomorphisms, we can leverage our understanding of different concepts by applying knowledge of one system to other analogous structures."

Panama City – *Jun 28, 2012*

We left Pensacola about 5pm yesterday, glad to finally be moving again and excited for our first night on the Gulf. We picked a great one: clear skies, smooth winds and sunshine till dusk, followed by a beautiful starry night. Unlike the western Gulf, Florida's waters are free of oil and gas platforms. We only saw one other light at sea- a stationary shrimp boat. We never lost sight of land but traveled far enough away to avoid the light pollution. After dark the wind and waves dropped to a dead calm, we lowered the sails and motored through the night. Once the half moon set, it was just us and the stars.

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[74] http://i.imgur.com/Ffvtz3g.jpg

[75] http://i.imgur.com/R3952HI.jpg

The Milky Way splashed across the sky until first light when the glassy water and still air took on a pastel rainbow. The plan is to stay in Panama City through tomorrow morning, then head to Apalachicola and on to Tampa.

Farewell Sean and Daniel *– Jun 29, 2012*

Sean and Dan are off to the Panama City airport, while Tyler and I are headed west out of St. Andrew Bay. It's been the experience of a lifetime guys, I'm glad y'all were able to share it with me.

We've got a 35 nautical mile trip to St. Joseph Bay, so Sean and Dan will probably have landed and driven back to Katy before we sail there and anchor.

Open Water *– Jul 2, 2012*

Tyler and I have been sailing for 42 hours straight now, with about 15 to go till we reach Tampa. It feels great to finally do some honest sailing. I loved seeing the Intracoastal Waterway, but motoring a sailboat just felt like cheating. And it's infinitely more expensive than sailing (since we're dividing by 0).

The water here is mesmerizing. I've never seen these colors before. Today we saw a giant sea turtle, at least 4 feet long, a Portuguese Man O'War, only 2 boats, and TO watched a pod of dolphins while I was taking a nap. A partly cloudy sky, warm but comfortable with the breeze, surrounded by bright blue above and below.

Open Water [30 sec video][76]

Dolphins [45 sec video][77]

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[76] https://youtu.be/ei2KXq_ErRk

[77] https://youtu.be/TkxZETJkTSk

We've been on a heading of 135° for 31 hours, only having to adjust the sails a few times. We take turns steering, but it's mainly just error-correcting. By balancing the sails and the rudder, the boat will hold a course pretty easily, swaying back and forth 10° from center. A little nudge on the wheel here and there keeps us on track.

This is meditation. Clean air, clear water and a clear mind. No worries. No rush. No expectations and no judgment. No yesterday and no tomorrow, just being. So much to experience. Every second is new and different. I can sit for an hour without hearing a word in my head.

Tyler's flying out of Tampa on the 3rd, and I'll continue on to Miami solo. It'll be a little more work , and I'll definitely miss our philosophical conversations, but I'm looking forward to some time by myself and the experience of single-handed sailing. My buddy Jared is flying in to Miami on the 17th, and then we'll sail across the Gulf Stream to the Bahamas whenever weather permits.

St. Petersburg *– Jul 3, 2012*

St. Petersburg turned out to be pretty cool. Tyler and I got in late on July 1st and headed into the city's municipal marina. From there we walked a few blocks downtown and found a burrito joint. Our first fresh food after 3 days of Open Water tasted heavenly, and we gulped down a pitcher of Negra Modelo. Walked around a bit then headed back to the boat, motored out of the marina and anchored for free just around the corner.

On Monday my grandparents drove over from Orlando to meet us and take us out for lunch. We went to Billy's Stone Crab and I got a delicious sirloin steak smothered with blue cheese, one of my favorite caesar salads ever and some mashed potatoes and gravy. The restaurant sat overlooking some mucky water, but a great view nonetheless and some interesting decor inside. It was great getting to catch up with my grandparents, my grandpa pointed out a building he had constructed as a civil engineer in downtown St. Pete and they told us about their upcoming cruise to Greenland. Afterward they drove us by a Walmart so I could load up on supplies and dropped us off back at the marina.

We hung out a while, using a nearby restaurant's free WiFi before heading North up Tampa Bay to anchor near another marina, closer to the airport to save Tyler some money on the shuttle. We listened to a Turd

Ferguson Metals Report podcast on the manipulation of unemployment, inflation and GDP figures before falling asleep.

This morning we motored over to Tampa Harbor and chilled a while until Tyler's shuttle came, I saw him off and then motored back over to the municipal marina for free WiFi to make this post. Now I'm on my own for a couple weeks until I pick up Jared in Miami, sorry to see my buddies fly home but looking forward to the experience of single-handed sailing. On the way over I finished book 2 of A Song of Ice and Fire (Clash of Kings), quite a bit different than Season 2 of Game of Thrones, I can't wait to see what happens next. I'll anchor off Egmont Key tonight near the entrance to Tampa Bay, then set out South tomorrow morning. I'll probably stop by Naples to get online again in a couple days, and then cut through the keys under the Channel 5 bridge between Long Key and Lower Matecumba Key before turning North.

Photo Album[78]

Fireworks – *Jul 4, 2012*

Just after sunset the fireworks started. I'm about 13 nm west of Venice beach, sitting almost motionless in calm winds. Too far away to hear the reports, but I can see colorful explosions all up and down the coast. Mixed in with the red, yellow and green sunbursts are white flashes of lightning, and I see tall dark clouds building over land.

I can't help but notice the symbolism. A storm brewing over America while her citizens celebrate, oblivious. Me watching from a distance, slowly drifting away.

Naples – *Jul 7, 2012*

I've been at sea for 3 days by myself since I left Tampa. It's hard to describe the experience. I didn't really feel lonely or bored, there was always something to see or do. Spent a lot of time reading, I'm pounding through A Song of Ice and Fire. I'm passed where the TV show left off so every page is new, and now I'm halfway through book 3.

I caught my first fish two days ago, a tuna I think, but I ate it without the slightest idea. Freshest fish I've ever eaten, it took less than an hour to get it from the sea to my belly. I cooked it up in some butter with onions and lemon pepper seasoning.

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[78] http://imgur.com/a/51vYU

Life at sea is efficient. I don't burn many calories, so I don't eat much and I sleep even less. During the day I never feel tired, but a few hours after the sun sets it usually hits me. Depending on the wind I'll either heave-to or just set the wheel lock and keep going. There's generally no one and nothing for miles and miles so slim chance I'll hit anything. I set my alarm for an hour or two and check my position, but I usually wake up before it goes off anyway.

You'd think it'd get monotonous, but no two minutes are the same. Watching the clouds, the water, the wind and waves is generally enough to entertain me, and I've got the Nook and laptop for when it's not. Plus there's food to prepare and cook, and god-forbid someday I might even get bored enough to clean up this pigsty.

From here I'll continue South and cut through the Florida keys between Lower Matecumbe Key and Greyhound Key where there's a bridge tall enough for me. I thought about going around to Key West but that'd be an extra hundred miles or so and I'm excited to get to the Bahamas.

Shallow Water *– Jul 8, 2012*

Last night I discovered I had anchored in too shallow of water. I was floating fine when I came in at high tide, but Naples has a 2-3' swing and I had to sleep with Sovereignty listing on its side. An old sailor anchored nearby rowed over to talk to me, and I ended up accompanying him back to his boat, Wind Song, to hang out for a little while. This man could talk, and I let him keep at it for about an hour before I asked him to row me back. He offered me all kinds of advice on sailing and boat maintenance, and seemed to think I was going to need to be towed out of my predicament, telling me I'd have to use my halyard to get towed out at a steep angle. He had to do this procedure on the Fourth of July, and said the water was almost coming in his windows he was leaning so far. I figured I'd just wait till high tide and motor out, and sure enough that's what I did the next morning, but it was an interesting experience nonetheless.

A Thunderstorm and a Rainbow *– Jul 10, 2012*

I faced my first real storm at sea July 8th, it wasn't too bad. I was just passing Cape Romano and watching the clouds build to the East. I was hoping

I would just skirt the edge of the storm and maybe pick up some speed when the temperature dropped 20 degrees and I realized I was going to get more than a glancing blow. The wind doubled in an instant to 20 or 25 knots, and I flew into action. It took a good 5 minutes and most of my energy to furl the jib. I pulled the main all the way right, and locked the wheel full to starboard as well, keeping me pointed at an angle into the waves and wind and just barely moving forward. Then I hopped down below to batten the hatches, and make sure nothing would fall as *Sovereignty* heeled. Then it was just a matter of playing the waiting game. I sat up top in the rain for a while until I was convinced the boat would hold its heading, and got myself a nice fresh water shower shivering in my birthday suit. The waves didn't get too big, maybe 4 or 5 feet tops, and the wind didn't get any stronger than the initial gust. Lightning kept its distance, and eventually I went down below to read until it passed. I watched my position on GPS and popped my head up now and then to make sure I wouldn't drift into anything. The wind let up after about a couple hours, but it kept raining right up to sunset. And then I saw one of the most beautiful sights I've ever seen.

Double Rainbow after the Storm [15 sec video][79]

Freedom – *Jul 10, 2012*

Freedom isn't a gift. It's not a birthright. No one can grant you freedom. It's not something that can be bestowed upon you. It's not determined by your geographic location, your ancestry, or your country. No piece of parchment can protect it. No government can secure it for you. No army can defend it. You can't give up some liberties to protect the rest. It's all or nothing, freedom or enslavement, and the choice is up to you.

Freedom is a state of mind. It's a personal decision to stand up against coercion. People will always try to control us. People will always threaten us with violence. Sadly, that's a given in this world. It's up to us to decide how we will respond. To acquiesce or to fight back. To wear our chains or break free. Slavery or liberty.

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[79] http://youtu.be/WRP-sl-5Fp4

Freedom isn't free. The price is eternal vigilance, but I call that cheap.

"Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take; but as for me, give me liberty or give me death!" – **Patrick Henry**

Key West – *Jul 10, 2012*

Photo Album[80]

I'd planned to skip Key West and cut through the middle of the Keys, but a strong SE wind made that course difficult and this course easy, so Key West it is. Another 3 days at sea from Naples, I'm getting used to this life. Still burning through A Song of Ice and Fire, just about finished book 3 today and I'd say it's my favorite so far.

It's been kinda overcast and rainy with scattered storms since I left Naples, not exactly the nicest weather to be outside in but it does help me move faster. Faced my first real storm at sea- A Thunderstorm and a Rainbow. Had to furl the jib a few times when the wind picked up to keep from getting blown around too much, or worse- tear the sail, but I only had to duck down below deck twice when the rain was too heavy for my liking.

Besides the storms it was a pretty uneventful sail. Sleep, eat, sail, read and repeat. Saw some dolphins, but I see them about every day so they've lost their novelty. Saw a sea turtle for a second before it ducked below the surface. Other than that just waves and clouds till I approached Key West.

I love these little Keys. There's lots of them all around Key West, little mounds of dirt and trees rising out of the blue-green water. I didn't get too close to them yet, but eventually I'm sure I'll anchor near one and paddle the kayak ashore to go exploring.

Key West is teeming with boats, most of them anchored out East of Fleming Key, just north of Key West. I anchored among them for a while, but I couldn't get Wifi so I decided to head into the marina. I docked after they closed, so I'm thinking I'll just leave before they open and stay the night for free. Next stop, Miami.

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[80] http://imgur.com/a/GwQhZ

Straits of Florida – *Jul 13, 2012*

This water is the deepest, darkest violet I've ever seen. My camera can't do it justice.

I just woke up from the craziest Inception dream. I left the boat sailing itself, nothing around for miles and miles so no real danger there, and I set my alarm for a one hour nap. In the dream I was sleeping in the same situation when I felt the boat accelerate like crazy, I went up above to see what was going on and I had just entered the Gulf Stream. Apparently my subconscious has a poor understanding of how it works. I was looking down on the ocean from way above the boat and the waves in the loop current appeared like giant rolling hills distinct from the rest of the water. Then I woke up, and I was back below deck again, but the boat was all falling apart. The mast was in the wrong spot, leaning against the side of the hull. I tried to open a drawer and it fell to pieces in my hands (which has actually happened, but in real life just the front panel came off and in the dream the whole drawer broke into tiny fragments). Then I looked at my windows and the were completely sideways, running up and down instead of horizontal along the side. Then I knew it was a dream. I tried to wake myself up, but I kept waking up within another dream. Some pretty scary seconds there as I'd awaken to look around at the boat in some crazy condition. Transitioning out of sleep is pretty much the only time I panic, and I can have some really funny reactions. Then I woke up for real, went and checked my position and everything was fine. I'm about 33 nm SE of Key West, the mast is where it should be and the boat's holding its course. Seeing this deep violet ocean almost makes me wonder though.

Good thing I don't get seasick, cause I probably would have today. These are the waves I've been expecting the whole time, but turns out they're not as common as I'd thought.

Straights of Florida [2 min video][81]

Man I'm moving. Feels funny to call 8 mph fast, but this is definitely the farthest I've made it in a day the whole trip. I thought it would take a few days to get from Key West to Miami, but it looks like I'll be there tomorrow. I set just about the perfect course today. The forecast was for a NE wind in the morning becoming a SE wind in the afternoon. So I sailed way out SE of Key West this morning, hoping to pull just a single tack and run parallel to the Keys all the way North. Worked out perfect. Around sunset it was looking like I'd have to tack again to beat away from shore, but then the wind kept moving farther South and Sovereignty pulled a slow eastward curve without me doing a thing. I didn't have to trim the sails or touch the wheel for hours. The current's helping a lot. I hove-to around 2am to take another nap, and I'm moving NE at almost 2.5 kts even though I'm motionless on the water.

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[81] https://youtu.be/l0sLqIb7VPw

There's quite a bit of bioluminescence out here. I've seen some before, but now it's like waves of stars crashing against my hull, fireflies dancing in the whitecaps. Too bad my camera can't capture it.

Miami *– Jul 14, 2012*

Wow, Miami is hoppin'. I don't know what I expected, but it's bigger and busier than I had imagined. Sailing in was awesome, the Intracoastal Waterway goes right through the heart of the city. You can sail with me for 10 minutes and take in the experience for yourself:

Sailing into Miami [10 min video][82]

Or at 10x speed:

Sailing into Miami 10x speed [1 min video][83]

I motored all over looking for a place I could anchor and get WiFi, but no luck. During the search I happened to pass a vacant lot for sale with a nice dock… so I took advantage of it. The marinas here are crazy expensive, and I didn’t think anyone would mind, so I left a note saying I was having engine trouble and would move ASAP, and left my phone number to call. So far no calls and no complaints.

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[82] https://youtu.be/L3qeRxSz9ww

[83] https://youtu.be/pmxb06LzOic

My mom and brother are flying in to see me tomorrow! I’m super excited, I’ll probably update this post with more pictures in a few days. And on the 17th, my next shipmate Jared Reyes flies in, and a couple days after that we’ll sail 50 miles East to the Bahamas!

Another Crazy Dream – *Jul 16, 2012*

Sleeping on dry land threw my subconscious for a loop. Besides the night on Horn Island, this was my first night sleeping off the boat since the beginning of April.

I left my boat tied and locked to a dock (on an empty lot for sale along the Venetian Causeway, asking price: $4 million), and went back with my mom and brother to spend the night at the hotel (couldn’t resist that AC). I get to sleep around midnight, and wake them up at 12:45 yelling “Oh shit, oh shit, oh shit!” about two dozen times.

I could have sworn my boat was crashing into a stone building at sea, and waking up in this strange place only made the transition worse. It was pitch black as I awoke, but I could make out the walls rising all around me, and the white of the sheets on the bed in front of me frothed like crashing whitecaps. A voice from the building is saying “it’s okay, it’s okay”, and it took a long time to process where it was really coming from. Sitting up in bed, seeing these two faces staring at me in a dark, enclosed space… my mind couldn’t make any sense of it.

It’s incredible that my conscious self can emerge from the same brain that produces such insanity. Kinda fun to be reminded that we’re trapped in this head together.

Movies to Free Your Mind – *Jul 17, 2012*

Film is a powerful medium, especially for the audio-visual learners like myself. Movies can contain deep truths that can be applied outside their fictional universes. We can learn a lot from an active, involved viewing. Below are some of my favorites, and some of the lessons I’ve learned. So the next time you watch these movies, try to look below the surface. Try to find parallels with your own life, and see if you get more out of it.

Braveheart – “Your heart is free. Have the courage to follow it.” “They may take our lives, but they will never take our freedom." "Men don't follow titles, they follow courage." "Every man dies. Not every man really lives."

The Matrix – The machines represent the state/government. They have created an illusion, "the Matrix", to blind you from the truth. "The Matrix is everywhere. It is all around us. Even now, in this very room. You can see it when you look out your window or when you turn on your television. You can feel it when you go to work… when you go to church… when you pay your taxes. It is the world that has been pulled over your eyes to blind you from the truth. That you are a slave, Neo. Like everyone else you were born into bondage. Born into a prison that you cannot smell or taste or touch. A prison for your mind."

The Truman Show – Like Neo in the Matrix, and like us in real life, Truman was born into bondage. An illusion keeps him passive and controllable. Fear keeps him enslaved. Only by overcoming his fear is he able to escape his prison.

Star Wars – The Empire is the Empire, ie. the American Empire. They're the bad guys. The rebels fight the Empire, and they're the good guys.

V for Vendetta –

V for Vendetta Speech [4 min video][84]

Fight Club – "The things you own end up owning you." "No fear. No distractions. The ability to let that which does not matter truly slide." "Reject the basic assumptions of civilization, especially the importance of material possessions." "It's only after we've lost everything that we're free to do anything."

Lord of the Rings – The ring of power represents power. No one is strong enough to hold it, no one can wield it to make the world better. Anyone who touches it is corrupted. You have to destroy it (preferably in the fires of Mount Doom.)

New Crewmate – *Jul 17, 2012*

Jared flew into Miami on July 17, 2012 and we had fun around town for a few days before setting sail towards the Caribbean. After my mom and brother left, I went back to docking at the $4 million lot until a neighbor asked who had given me permission. I smiled and said nobody. She said we were lucky she didn't call the police. After that I moved to anchor and we had to paddle the kayak to shore. We left the next day, after I posted my Declaration of Independence.

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[84] https://youtu.be/KKvvOFIHs4k

Photo Album[85]

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[85] http://imgur.com/a/4psqz

Chapter 4

Expatriation

Why I’m Leaving America *– Jul 20, 2012*

Goodbye, America.

For as long as I’ve lived you’ve been my only home. I’ve had a wonderful life here. Your inhabitants are almost universally kind, and I’ve become lifelong friends with many of your citizens. All of my family lives here, everyone I have ever known or loved, and I will miss them all a lot. But after 22 years, I feel impelled to leave.

According to your founders, “When in the Course of human events it becomes necessary for one [person] to dissolve the political bands which have connected them with another and to assume among the powers of the earth, the separate and equal station to which the Laws of Nature and of Nature’s God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation.” Well, I certainly wouldn’t want to be disrespectful.

At first glance, you look like the greatest of all social systems. You seem like a stable and sturdy structure. People look at you and see strength. They see freedom and opportunity, democracy and unity. But a peek behind the curtain reveals a scared old man, desperately trying to maintain an illusion. Your size and complexity hide a simple truth: that you don’t physically exist. You are nothing more than a system of human interaction; not a thing in and of itself, but the result of a widespread pattern of behavior. You emerge from our beliefs, and the actions they compel us to take.

We learn our roles and play them well. The guards act like guards, the judges act like judges, the cops act like cops, and we all pay our taxes. You exist because individuals behave as if you do. Of course this seems patently obvious, but it has some frequently overlooked implications. There is an inherent problem with this sort of system, a cancer written in your genetic code, an inoperable tumor that spells your demise.

The mistake is so subtle that generations have failed to identify it. Your creators devised a way to hide it for centuries. They separated your powers, pitted ambition against ambition to mask your fatal flaw. As long as people were content, as long as your tyranny was well hidden, the problem went unnoticed. But it was there all along, metastasizing beneath the stars and stripes.

The problem is choice. I alone control my actions. Your system depends on us adhering to a certain pattern of behavior, but we each have the power to reject it. You will only survive as long as individuals believe you exist and act accordingly, but you cannot compel the choice. You can never take away my ability to choose life without you, to ignore your behavioral suggestions, to act on my own.

Oh but of course, you tried your best to conceal this fact, to convince me I needed you, to give me faith in your existence, to make me fall in love with you, to count you as my own. You started young, indirectly at first and then directly through my "education."

For thirteen years I was forced into your indoctrination facilities, and social pressure pushed me into another three and a half. Without a doubt I learned many useful things. I had many wonderful teachers who only wanted what was best for me. I am grateful for their wisdom.

Far more sinister were the unspoken lessons. Structure matters more than content; your hidden messages are far more powerful than what is said aloud in lecture. For more than a decade you required my direct submission to your representative at the front of the class, using all the silly threats that work on a child. You taught me that knowledge is obtained from authority, that all problems have answers in the back of the book. You judged me constantly, trying to teach me to look to others for approval, trying to make me conform. You lead me in the pledge of allegiance over 2,000 times. But worst of all, you tried to parent me. You tried to make me realize a familial bond with you, to make me believe you had my own interests at heart. You tried your best to make me choose you, but it didn't work.

The more you try to coerce my affection, the more obvious the ploy becomes. All the ridiculous forms of manipulation that go unseen by the masses are the red flags of malicious intent. My obedience isn't for my protection, but for yours. You don't want me to see the choice because that leads directly to an investigation of merit. No longer are you a parent that must be respected, but a business transaction that must be evaluated. Well America, your benefits don't outweigh your costs. You do more harm than good.

I recognize your advantages. I understand you have rivals who treat their citizenry far worse. Raised in another land, it's possible I would have never received enough information to understand my situation. And for that, I thank you. But it's not enough. Your existence relies on a mortal sin, and no amount of bribery will sway me to forgive you for it. No number of schools, hospitals, roads or defense networks could ever justify your systematic use of aggressive coercion.

Coercion is "the practice of forcing another party to behave in an involuntary manner by use of threats, intimidation, fraud, or some other form of pressure or force." Making someone do something they wouldn't out of their own free will. Aggressive coercion means the initiation of such action. Threatening someone who hasn't threatened you, defrauding the trusting, harming an innocent; the initiation of force.

Coercion is your single purpose, your only weapon and your only form of control. A government IS a monopoly of the "legitimate" use of aggressive coercion; a monopoly over the initiation of force IS a government. Hear it straight from the horse's mouth. When all you have is a hammer, every problem looks like a nail.

It's not your fault. You were created with one lever, so every time the people wanted change you pulled it. When people got scared about retirement, you gave them Social Security. The price: enslaving the next generation. You put the bill on the backs of their children before they were old enough to vote, and the only choice you provided was pay up, leave or live in a metal cage. When people got scared about flying or drugs or pornography, you pulled the lever and made more threats. All of your rules are coercive. Every single piece of legislation is ultimately backed up by a threat of physical violence. Every law is a gun under the table, and I don't negotiate with terrorists.

I will not support the use of aggressive coercion as a solution to social problems, even implicitly by voting or paying taxes. It causes far more problems than it solves. This isn't a belief that was handed down to me as many of your citizens obtained their ethics. My belief that that coercion is undesirable and ineffective isn't based on faith, and I'm open to the possibility that I'm wrong. But this is the conclusion of my sincerest attempt at an objective search for truth. It is a conviction forged with evidence and reason. I don't believe aggressive coercion is wrong because anyone says so; I won't support its use because of the way it affects humans as individuals and societies.

This probably seems like a radical and unsubstantiated belief to you. It's certainly an uncommon principle within your borders. It might be unusual, but popularity has no bearing on truth. On the scale of individual interactions, it's clear that receiving threats is not desirable. Nobody wants to be coerced, by definition. But what if threats can be used for the common good? What if the negative effects of coercion to a society are outweighed by its benefits? The more I learn about the world, the more I realize that this is not the case. Coercion inhibits the evolutionary search of the free market, it prevents us from trying out new solutions to social problems and from recognizing failures. I'm convinced it's the cause of almost every problem you purportedly use coercion to solve.

Of course, your greatest supposed benefit is the defense you provide. But what noble defender extorts payment from its clients? How could you possibly be defending us when YOU are our greatest threat? Like the Mafia's protection racket, our greatest danger presents itself when we refuse to pay. There is only one entity that has ever threatened me with death or imprisonment, and that is YOU. No foreign government, terrorist organization or even a criminal on the street has ever threatened my life or freedom, only you America.

Granted, you provide defense from some of your smaller competitors. You imprison lesser thieves and murderers, a charade to prove your worth. Clearly these are problems that any society must deal with, but ceding the power of legitimate defense to a single entity only exacerbates them. Without feedback such as prices and profit, no one has any idea what methods are effective or desirable. Granting a monopoly of defense is like giving all the guns to an army of deaf men and acting surprised when they don't respond to our shouts. People deserve a distributed, voluntarily-funded defense network that utilizes free exchange to find the cheapest, most desirable and most effective methods of preventing the initiation of force. Imprisoning tax evaders and drug users while bombing innocent civilians in the Middle East is NOT defense, and I will not allow you to fund your crimes with any portion of the fruits of my labor.

Almost every social problem can be traced back to your gun in the room, pointed at us under layers of abstraction and legalese. The most subtle, and most deadly, was the corruption of the price system. You enslaved us with the strongest chains known to man: a debt-based monetary system. You deprived us of accurate value measurements. You prevented us from equilibrating supply and demand. You tilted the scales in the market, and threw off all our transactions. You prevented us from acting rationally by quietly replacing our money with a cheap replica, and forcing us to use it.

But your tyrannical nature isn't the only reason I'm leaving, especially not why I'm leaving right now. I'm not only fleeing your coercion, but the inevitable economic collapse your inhabitants are only beginning to appreciate.

I better explain that phrase. "Economic collapse" means a reduction in economic complexity: a decrease in specialization, a slowdown in trade, brought about by a loss of confidence. It's not a fantastical, delusional prediction. Your economy is based on a con game that cannot be sustained.

Your monetary and fiscal problems are rivaled only by the artificial complexity of your financial system. But at its heart, the problem is simple: Everything is based on the assumption of infinite exponential growth. For a long time, that assumption was never tested. We could stick straws in the ground and produce energy for pennies on the dollar. The underlying economy actually grew exponentially. This allowed the Ponzi scheme of your fiat currency to survive a little longer than usual. For a while, the growth of the money supply reflected the productive capacity of your people, enabling an astounding degree of complex specialization and trade. But the era of cheap energy has come to an end. Like any population that finds an untapped resource, we went for the easiest parts first. Now all the low hanging fruit has been eaten, and we can no longer increase annual global oil production. We have generations of social arrangements built on assumptions that are no longer valid. Your money supply is expanding faster than ever, but it no longer mirrors the productivity of your citizens. It is being artificially expanded to paper over the cracks in the dam. Your puppeteers have made more promises than could ever be fulfilled, and they are printing money to pay off their debts. This never ends well. Regardless of whether you print your way into hyperinflation and currency collapse, or default on your debt, it's clear your path is unsustainable. Collapse is mathematically guaranteed, and it's not something to play chicken with. I'd rather be ready a decade early than a day late.

Some might think I should work to save you instead of leaving you to crumble. The ship is sinking, and we either need to make repairs or head for the lifeboats. But I took a look at your blueprints, and you were never structurally sound to begin with. You were constructed with fundamental flaws. Moreover, I believe we're past the point of no return with this monetary system, and the dollar isn't worth saving. The mainstream media is the band playing on the Titanic.

"There is no means of avoiding a final collapse of a boom brought about by credit expansion. The alternative is only whether the crisis should come sooner as a result of a voluntary abandonment of further credit expansion or later as a final and total catastrophe of the currency system involved." **- Ludwig von Mises**

I don't want to be here to witness your darkest hour. We will all have to face this paradigm shift, but I want to confront it on my own terms. I want to meet it with consciousness, integrity, and a sense of purpose. I don't want to wake up one day and have a rough transition thrust upon me. I want to make that transition now, and sleep through your collapse.

[I wrote my first draft of this in December 2010, and I've been pretty concerned I wouldn't be able to get ready in time. While "extend and pretend" was the worst policy for the American people, it did provide me with time to prepare myself, and for that I again thank you.]

America, I never signed your social contract. I never agreed to taxation, even with "representation." I refuse to recognize the legitimacy of an organization founded upon aggressive coercion. I don't recognize your laws and I don't recognize your property claims. I'm not leaving because I can't live here with my principles, I'm leaving because you physically overpower me. I stand a much better chance fighting for my freedom outside your territory, and I don't believe it's cowardly to admit that. I see no value in your Federal

Reserve Notes, and I sure as hell don’t owe you any. Your debts are not my own. Your battles are not mine to fight. I will not allow you to enslave me any longer.

I don’t know what the future holds. I may be underestimating the difficulty of life without you, or your vengeance towards dissidents and deserters. I could very well come to regret leaving your borders, but right now I highly doubt it. All I can do is make the best decision with the information I have, and the only logical conclusion is that life will be better without you. Like your people are so fond of saying: freedom isn’t free; but I’m more than willing to pay the costs, no matter how high they might prove to be.

Miami to Great Isaac – *Jul 21, 2012*

My first couple days as an expatriate were awesome. We ended up leaving Miami about 4pm July 20, 2012 and immediately hit the biggest waves I’ve seen yet. The coast around the channel funneled the waves coming from the East wind, building crests to five or six feet high

Motoring out of Miami [1 min video][86]

We forgot to strap the kayak down before leaving, and nearly lost it when a huge white-top crashed over the bow. That sent Jared and me scurrying to save it, leaving the helm unattended. As we got the kayak back into position, Sovereignty veered to starboard and headed straight for the jetty. Jared ran back and course-corrected while I continued wrestling with the dinghy, no doubt putting on a funny show for the Coast Guard ship following off our port quarter. Eventually we got everything in order, put some distance between the boat and shore and popped a beer to celebrate the voyage. The waves calmed down, we raised sail and killed the engine to begin our journey across the Gulf Stream.

The wind stayed strong out of the East so we initially headed to the NE, but with the fast current pushing us North we made hardly any Easterly progress. We tacked and sailed at a heading of about 150°, but moved almost due East. We decided to skip Bimini since we were already North of it and head for Great Isaac instead, a much smaller island 20 nm to the North. Sailed through the night taking naps in shifts, and spotted land about noon on the 21st. It took a good 3 hours to sail into the wind and approach the island, but we motored the last hour and dropped anchor around 3pm, 23 hours after leaving America.

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[86] https://youtu.be/QorvAV4T_CM

Loaded up the kayak and headed to shore almost immediately, excited to explore this new land and snorkel in the clear blue water. Landing was a little tricky, there was no beach, so we found a spot among the petrified coral with the gentlest slope and timed our final approach with the waves. Made it ashore without incident, pulled the kayak far above the water line and hiked towards the lighthouse and abandoned village.

The half-dozen or so houses looked like they'd been uninhabited for nearly a century. Fading pink stucco exteriors and rotting wooden roofs surrounding the rusting lighthouse.

Great Isaac Lighthouse [picture][87]

We instantly decided to climb it. Ropes had been hung to get to the first story, and then old wooden stairs spiraled up the rest of the way. The view from the top was incredible. I hate that we didn't bring the camera, but after drowning 2 phones off Horn Island I was worried about getting it wet. 152' provided an amazing panorama of the island, and it was really cool to see Sovereignty floating just offshore to the West. We could clearly make out the shallow corals, the tiny forest to the East, and all the little pools that had formed atop the rock.

Next we went snorkeling. We picked a spot based on the view from the lighthouse, donned our fins and masks and jumped in. Colorful fish and coral surrounded us, not the most I've ever seen but it was definitely a good dive spot. We must have spent two hours swimming along the coast trying to kill a fish with the spear gun before I finally found success. Turns out it's harder than I had expected. But eventually I got a little yellow fish right through the side, and later another little yellow guy through the head. The bigger fish were smart enough to keep their distance so we couldn't catch dinner, but we were excited just to have speared something.

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[87] http://imgur.com/YseDFhU.jpg

Exhausted, we exited the water and sat on the dry coral, looking at all the snails stuck to the side. We decided snail was almost as good as fish, and plucked a couple dozen to bring back to the boat. Then we began the 30 minute hike back to the kayak and rowed away from Great Isaac.

We ate our "real" meal first, some chili, potatoes and beans mixed together. Then decided to get adventurous and cooked the snails in some vegetable oil with garlic salt. We erred on the side of safety, boiling them for 10 or 15 minutes and ended up with some tough, chewy meat. A few bites was enough so we could say we did it, and tossed the rest overboard.

Snails [picture][88]

Cleaned up the cabin a little and passed out pretty early. I'm writing this on the morning of the 22nd as we're preparing to set sail again. Next stop is probably Great Stirrup Cay in the Berry Islands, but we might just keep going and hit Great Abaco Island or Eleuthera. We're trying to move quickly to the South to minimize the threat of tropical storms.

Stormy Seas – *Jul 22, 2012*

Day 3 as an expatriate wasn't so much fun.

Storm Near Great Isaac [1.5 min video][89] Stormy Seas [30 sec video][90]

After leaving Great Isaac we hit a really strong storm, the worst I've seen yet. Gusts up to about 30 or 35 knots, waves up to 7 or 8 feet, and it lasted for a good 3 or 4 hours. I spent most of that steering and shivering until Jared relieved me for a little rest.

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[88] http://imgur.com/k2bZNjv.jpg

[89] http://youtu.be/iebup0_Pe10

[90] http://youtu.be/Kz4Kv3F8QKU

Trying to Outrun Storm [30 sec video][91]

It slowly died down, and we were able to see the sun for a couple hours before another storm hit. This one wasn't as bad, but still wet, windy and cold. It hung over us until sunset, clearing up as we approached Grand Bahama Island. It's midnight now, and I can finally see the stars clearly. The Milky Way looks like a thick white glowing cloud, and I just saw a meteor.

Day 4 wasn't much better. My laptop, our main source for navigation, ran dead in the night. We tried to start the engine to charge it, but the ship's batteries were dead as well. Without any sunlight the day before, the solar panels couldn't charge them, and I had forgot to run the engine between the excitement of the storms. We hugged the coast of Grand Bahama for a while before another storm approached and forced us to head for deep water to avoid the risk of running aground.

Rain, rain and more rain, off and on throughout the day. The wind wasn't so harsh this time, more like a heavy shower than stinging bb's, but it still wasn't much fun being wet all day. Eventually Jared and I grabbed our bottle of wine to lift our spirits, passing it back and forth singing "The Weather Outside is Frightful" and "What do we do with a drunken sailor?", laughing at our misery.

Another day without the sun and we still couldn't charge the batteries. We were using our backup handheld GPS, but it doesn't have the detailed nautical charts so we basically went in circles where we knew the water was safe.

No GPS [picture][92]

Another clear night frustrated us, we only wanted some direct light from our closest star, not its neighbors.

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[91] https://youtu.be/s-iJIUh56p4

[92] http://imgur.com/f3k8Rkr.jpg

Rolling with the Punches – *Jul 24, 2012*

July 24th we finally got enough sunlight to start the engine. We were sitting in still air, but by the early afternoon the solar panels had soaked up enough rays through the partly cloudy sky to crank the diesel. We started it in neutral and began charging the laptop, then decided we might as well kick it in gear and start moving again.

Nothing. I shifted to forward and reverse over and over, but the boat didn't move. I could hear the transmission click when the gear caught, but we were still motionless. I left it running to keep the batteries charging, and went down into the engine compartment to see what the problem was.

Every boater's worst nightmare: water rushing in. The propeller shaft had sheared in two, and seawater was flowing in fast. I immediately popped out and swung into the cabin to check the bilge, which was full after 10 minutes since starting the motor. I turn on the bilge pump, and grabbed some rags to plug the leak. I ended up using four, one stuck in the hole, a larger one wrapped around that tight, the next biggest wrapped around that and pinned against the hull, and one big towel that I tied in a knot around the whole mess.

Rags [picture][93]

That worked shockingly well. Water still flowed in, so we timed how long it took the bilge to fill up: nearly 3 hours just to fill the bottom portion, and Sovereignty can hold a lot more than that if necessary. So we wouldn't be sinking any time soon, as long as we remembered to empty the bilge regularly. But now we had to re-route, figuring Nassau would be the best place to make repairs. And we'd have to get there under wind power alone, no problem… as long as we had wind.

Doldrums – *Jul 25, 2012*

The sun exchanged places with the wind. For two days we made hardly any progress. It was no problem keeping our electronics charged, but we were stuck in the Northwest Providence Channel averaging about a knot. 60-odd nautical miles to go at one nautical mile per hour means several days at sea.

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[93] http://imgur.com/7mUopVZ.jpg

Doldrums [2 pictures][94]

The ocean looks like a calm lake, tiny little 6 inch waves if there were any at all. We could see fish swimming around the boat, so Jared donned the snorkel equipment the first day to try and spear one, and I followed suit the second day scoring a 2 foot sucker fish that mistook Sovereignty for a whale. Big mistake.

Suckerfish [picture][95]

It was skinny so there wasn't much meat, but I cooked it up with some potatoes and onions in vegetable oil and it provided a nice flavor and a little protein. Besides that there wasn't much to do. Made some repairs, aired out our laundry, read a lot and drank a little.

We hadn't expected to be at sea for so long, but it hasn't been too bad. I'm writing this just after sunset on July 26th, and we're finally getting a decent wind. Moving at 3.5 kts directly towards Nassau, 25 nm out so we should get there tomorrow morning. Then I'll have to find a shipyard via VHF radio, probably need to get towed in and figure out how much this is going to cost me. I'm sure I'll have to find a coin shop and sell a gold American Eagle, but Jared and I are really excited to get on land, and having to wait a few days for repairs wouldn't be the worst thing in the world since it would give us time to see Nassau and get caught up on the Internet, maybe even get a real meal in us and communicate with some other humans.

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[94] http://imgur.com/a/ij02N

[95] http://imgur.com/gSMWZjV.jpg

Nassau – *Jul 27, 2012*

The glow of Nassau started to become visible in the pre-dawn hours of July 27th. We were finally making good time, averaging about 4 knots and sailing straight for the channel. Too fast, it turned out. We had to sail off course a while so we wouldn't arrive before sunrise, knowing we'd need to find a tow boat to pull us in. I hove-to and rested for a bit, then continued inbound once the sun was up.

As we approached the channel, I began calling on VHF channel 16 trying to find a shipyard. "This is sailing vessel Sovereignty inbound to Nassau, requesting information on a shipyard to make repairs." Eventually a woman's voice from the Blue Dolphin responded: "To the ship requesting repairs, go to channel one-one." "Roger that, one-one." Switched over and the captain of a dolphin tour described how to find Brown's Boat Basin where we could get hauled out of the water. We thanked her and decided we'd try to sail in as close as possible, to reduce the tow cost.

Right before we entered the main ship channel, the wind died. Without an engine, we were sitting ducks. Decided to launch the kayak and try to tow Sovereignty out of the way, mainly because we thought it'd be a funny sight for the tourists.

Jared Pulling Sovereignty [picture][96]

Jared tugged and strained but we didn't make much progress. Eventually the wind stirred and we were able to sail through, pulling off to the right after we passed the end of the jetty to get out of the way of a rapidly approaching Carnival cruise ship. We sailed a little further into the harbor, watching the water depth through the crystal clear water until we were far enough out of the way to drop anchor.

Next I had to find a tow boat on the radio. After a few calls we got a response from Sea Dog 1, who called the haul out facility for us to discover they didn't have any room. Our choices were to get towed into a costly marina or a free anchorage, so it was an easy decision. We had some trouble digging in our anchor when we got there. Sea Dog 1 pulled us backwards to drive it in, but 10 minutes later we noticed the anchor dragging. The currents and the wind shifted all over the place, and we swung close to an uninhabited catamaran and had to use our feet to fend her off. Opened the jib to sail back into our original spot, and just happened to notice a huge concrete block 10 feet below us. It was the anchor for a mooring ball, but the ball was nowhere to be found. We got anchored nearby, and I snorkeled down with a rope. I found a thick steel cable bolted through it, and a loop to slip my rope through. Brought the rope back to the boat, and pulled ourselves in close. Then I went down with another line and attached it to my bow. Then I snorkeled down to my anchor, carried it across the seafloor and wrapped it around the block. This is the most secure anchorage I could ever imagine.

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[96] http://i.imgur.com/Hq9GFpV.jpg

Sovereignty's not going anywhere [picture][97]

The tow boat captain pointed out a bar with a dinghy dock, the Green Parrot. It's only a 5 minute paddle away, and we're able to leave the kayak locked to the dock for just $5/day. Since they told us we can apply that $5 towards drinks, we made a habit of drinking a Bahamian Sands whenever we got to shore each morning.

Our first stop on land was a nearby marina where we met Jason, an employee who gave us some great advice. He told us to get the new shaft ordered before we had the boat hauled out so we could avoid paying for the days it would just sit there. He was friends with Robert Brown of Brown's Boat Basin, and said he was headed over there and offered to give us a ride. So we got our first taste of Nassau from the back of a blue pickup.

We thanked him for the ride and went inside to meet Bob. He was a pretty helpful guy, also recommended ordering the shaft first and said he could help us find a replacement if we had the dimensions. I didn't know them, so we said we'd return to the boat to look through my documents and see if we could find it. The Basin closed "at midday" on Saturday, and never opened Sunday so we hoped we could find the specifications either that

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[97] http://i.imgur.com/2La5e1q.jpg

Friday night or early the next morning so we could order the shaft before the weekend.

Next came the search for dinner. After a week at sea we were excited for a real meal. Walked all along Bay Street, and stopped for a minute when some guy changing a tire called to us. Didn't take long to figure out he was a little crazy, but more evangelical than dangerous. We asked him where he liked to eat, and after a little more preaching he told us he could show us to one of his favorite spots.

Then he showed us how he played the bag-comb, slipping a comb inside an empty plastic bag and buzzing a single note. He stopped throughout our walk to show off his music to little kids, but eventually he took us to a Chinese restaurant and took the liberty of ordering us ribs. They were pretty cheap and sounded good so we didn't protest, but when he asked for a $4 beer we had to refuse. Jared gave him a couple bucks "for the bus" for his trouble, and listened to one last speech before he took off. The ribs turned out delicious so it worked out pretty good. After that it was back to the boat to empty the bilge, and hopped in the water to snorkel and spear fish. I shot a pregnant stingray that gave birth to stillborns after she died. Then back to shore to explore Paradise Island.

We walked across the bridge and bought a few Sands each at a liquor store, then went looking for a Starbucks to get online. We found one in the basement of the Atlantis, and I began looking for the dimensions for the propeller shaft. No luck on that front, but I posted to the Allmand Google Group to ask other owners. Got caught up on the Internet, and then headed back to the boat for a well-deserved rest.

The days began to blur after that. We ended up pulling the propeller shaft out from under the boat at anchor to get the dimensions, snorkeling down and turning screws 30 seconds at a time until the job was finished. Then we kayaked it to shore and walked it to the Boat Basin.

Prop Walk [picture][98]

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[98] http://i.imgur.com/EyPGvVK.jpg

We must have walked back and forth from the Boat Basin a half dozen times by now, checking to see if the part has come in. A shipping mistake prolonged our stay even longer, but we've enjoyed our time.

We met Andi, Jamie Lee, Cheyenne, Keith, and Hannah on the volleyball court at the Atlantis, and soon met Jamie Lee's mom Charla and her friend Renee when they came to watch. Charla and Renee became our "Bahama Mamas", and they really took care of us once we told them our story. They let us shower in their hotel room, an awesome gift for us and probably a strange surprise for Jamie Lee and Cheyenne. They didn't seem to mind though, and we had a lot of fun hanging out watching the Olympics. They even bought us pizza and soft drinks, absolutely making our day.

Since then we've just been passing the time until the shaft gets here. We snorkeled a lot, found, prepared and ate conch, spear-fished, explored the city, ate at several local restaurants, bought groceries, drank and played pool at a bar, swam in the pool at the Atlantis, watched movies, kayaked down the coast, saw some incredible sunsets, and spent so much time on the Internet we're bored of it again.

Photo Album[99]

Societal Collapse: Memetic Extinction Event – *Aug 2, 2012*

Understanding complex systems is all about finding the right perspective. Things are often complicated by our intuition. We tend to see the world through our own eyes, on the scale of individual interactions, assuming we are acting consciously and intentionally. But to understand a society, we have to give up this self-centered perspective. We have to forget that we are conscious actors, forget what it's like to be human and investigate the system from an abstract, detached perspective. To help us achieve this perspective, it's very useful to draw parallels to similar systems.

An economy is best imagined as an ecosystem of memes. Just as genes are units of information that encode biological processes, memes are units of information that encode cultural processes. Where genes use patterns of nucleotides to program protein production, memes use patterns of neural connections to program human behavior. Each of our cells contains a DNA sequence with about 20,000 genes, and trillions of these cells interact to form a complex human body. Likewise, our brains contain neural networks encoding thousands or millions of memes, and these express themselves through human interaction to form all the complex behavior of our modern society.

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[99] http://imgur.com/a/d97rp

Memes and genes bear many similarities. Both are abstractions, simplifications of the underlying reality, but both are useful tools for helping us understand these highly complex systems. Both genes and memes encode information for physical processes, acting like computer programs connecting inputs to outputs. And crucially, both are self-replicators. They copy themselves into the future, fighting the tide of the 2nd Law with feedback to maintain order against the universal flow towards disorder. Genes rely on a set of molecular machines for replication, and memes rely on human brains, especially our mirror neurons and language processor. Regardless of the storage and transmission medium, this key feature, the ability of genes and memes to replicate, results in the emergence of similar system dynamics. It means they both evolve via a process of natural selection, and are capable of building more and more complex systems atop the foundation of previous discoveries.

Complexity builds on complexity in systems with self-replication and feedback. Species evolve to fill open niches where energy can be extracted, and then new species evolve to eat them. Life grows more and more abstract, consuming energy farther and farther from the raw inputs of Earth. Food chains stretch and become increasingly fragile as one species relies directly and indirectly on the continued presence of other species. Ecosystems can continue growing more abstract and complex until some shock to the system destroys a critical chain in the food web. Then the complexity comes crashing down. Species face extinction in waves of cascading failures, pruning off entire branches of the Tree of Life. Extinction events pepper our planet’s history, and demonstrate the punctuated equilibria that increasingly complex systems experience.

Just like Biology, the memes of our culture replicate and evolve, growing more complex and abstract. Innovation builds on innovation, new tools allow the production of new tools, and key inventions produce fertile ground for new memes to grow. Complex society allows many memes to live far from the raw inputs of Earth. Just consider iPhone apps, and the long chain of products and services that stretches from the ground to your touch screen. iPhone apps rely directly and indirectly on a diverse web of memes for their continued existence, just as a tuna might be tied directly and indirectly to hundreds of other species. As our society has grown more complex, it has also become increasingly fragile.

When we talk about economic collapse, we should be imagining a process similar to the biological extinction events of Earth's history. A period when excess complexity is sloughed off, where the memes furthest from base inputs perish and only the most resilient cultural information survives.

If you like this way of thinking about economic collapse, you'll love this PDF:

Supply-Chain Cross-Contagion: A Study in Global Systemic Collapse [pdf][100]

Picturing Complex Systems – *Aug 4, 2012*

I've been thinking a lot about a mental image for complex systems that I first mentioned in Tropical Storms and Feedback Loops: the torus. It's been really helpful for me to have this picture to wrap my head around how these systems grow, evolve and collapse. It's still a kind of fuzzy idea for me, but it's definitely developing, so I thought I'd share what I've got so far.

All complex systems share certain features. There's only one way to fight the universal flow towards disorder, and that's with feedback loops extracting energy from their environment. So in my mind, the easiest way to picture a feedback loop is as a circle with nodes around the circumference and arrows indicating the flow of energy or matter. I'm thinking of something like the Krebs Cycle, but this picture could work for anything with feedback.

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[100] http://www.feasta.org/wp-content/uploads/2012/06/Trade-Off1.pdf

Krebs Cycle [image][101]

Now if you stand those circles on end like a balanced coin, and arrange them in a circle, you get a torus (the donut shape). This is how I picture a complex system that utilizes many feedback loops. In my mind, the surface of the torus is covered with nodes, just like the circles, but instead of only being able to transfer energy or information along the circumference of a single circle, each node can trade with any of its neighbors on the surface of the torus. So now the system isn’t just a single feedback loop, it’s a bunch of feedback loops that interact with one another to form a stable system. Then I imagine the inputs (information, materials or energy) flowing into the system at the top, and outputs (behavior, waste or heat) flowing out the bottom. The torus extracts the inputs along the inner wall, and distributes them throughout the system.

Imagining Abstract Feedback Loops as a Torus [image][102]

Our own bodies make a perfect example. It’s hard to see at first, but we’re actually shaped like donuts. Our digestive tract goes right through us, a little tube of “outside” with our bodies wrapped around. If you still can’t see it, imagine chopping off your arms and legs and shortening your intestines so they make a straight line from top to bottom. The raw input is fed into the top, resources are extracted along the inner wall, and waste is expelled out the bottom. The chemicals extracted from the raw inputs are transformed and transmitted around the body, and ultimately fuel the complex, abstract functions like the consciousness in our brain. The brain feeds back into the system by controlling hormone levels and food intake.

Now that we’ve got this picture, we can use it to imagine systems with different levels of complexity and efficiency, and also use it to visualize how systems collapse.

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[101] http://bit.ly/1QkIS0u

[102] http://i.imgur.com/oIwOqM5.jpg

Efficiency in a complex system means how many nodes are dedicated to raw resource extraction, relative to the total number of nodes. I like to picture this as the height of the torus, since that determines how many nodes are positioned along the inner wall. A really inefficient system is a long, tall, skinny torus like our digestive tract. Raw resources have to move past many cells in order for the body to extract enough energy to fuel itself. But inefficient systems are also resilient. They can handle lots of individual nodes failing without the entire system collapsing because they incorporate a lot of redundancy. A more efficient system is shorter and flatter, but also more fragile. With fewer nodes to power the system, any failures could have dire consequences.

Similarly, complexity can be thought of as the width of the torus. As a system grows more complex, it has more nodes on the outer ring, far from the place where resources are extracted. The complex, abstract entities that exist on the outer surface depend on a long supply chain. If we picture our societies this way, we might have farmers and miners along the inner wall, directly extracting material from raw resources. Companies like Apple or Microsoft would be along the outer surface. They represent the height of abstract complexity, and depend on a huge number of intermediary trading partners to supply them with the energy, materials and capital required to stay in business.

Increasing complexity generally leads to greater efficiency. New tools and inventions feed back into the heart of the system, allowing fewer nodes to extract more raw resources. Innovations like Just-In-Time supply chain management grant huge improvements in efficiency, but come at the expense of resiliency. With fewer nodes extracting resources, and fewer resources in the pipeline, any individual node going offline can result in a cascading wave of failures down the supply chain.

We can imagine our society as a torus growing wide and flat. We’ve become incredibly complex, making huge improvements in efficiency, but all at the cost of resiliency. We’ve become highly adapted to living off certain inputs that were historically cheap and plentiful, but those raw resources are becoming more expensive and harder to find. When the inputs to a complex system change suddenly, it can experience a collapse in complexity. To picture this, I imagine the disc-shaped torus sloughing off the outer bands.

Remember, the distance from the center represents complexity, and more complex entities require longer supply chains to sustain them. When the inputs to the system change dramatically, the nodes along the inner wall might not be able to adapt quickly enough to sustain the nodes on the outer wall. Especially in highly efficient but fragile systems where there are very few nodes dedicated to raw resource extraction, or when supply chains are stretched thin through efficient just-in-time restocking. Complex entities along the outer bands are often very sensitive to supply chain disruptions, and can fail quickly in a crisis.

Now I'm imagining the torus as a spinning disc, like a galaxy. In place of gravity (and dark matter) holding the outer bands in place, we've got supply chains and capital markets connecting these companies to the raw resources of Earth. If the system experiences a shock, those supply chains can break, flinging that excess complexity out into space, sloughing off those outer bands, leaving behind a torus that is less wide and flat, less complex and less efficient, but more resilient and sustainable.

A Fractal Model of Complex Systems – *Aug 12, 2012*

My mental picture keeps developing, so I'm going to keep writing about it. I'm not sure if it's useful for anyone else, but it's definitely helping me. A good visual can give us the "feel" of systems that are too complex to understand through-and-through.

So my last post talked about using the torus as a model for complex systems. But I'm not sure that I ever explained what exactly I mean by a complex system. Systems are everywhere and everything. A system is simply a whole made of parts that interact. So basically every noun is a system: atoms, molecules, cells, organisms, rocks, cars, cities, economies, ecosystems, climate, planets, stars, star systems, galaxies, super-clusters, and of course, the universe itself. But what's a 'complex' system?

By complex I mean "non-linear", which is a mathematical way of saying it's difficult to model with equations. In complex systems, the system changes whenever it encounters "an input". Unlike linear systems, the order of inputs matters. Complex systems have feedback, making them intrinsically difficult to predict, and difficult to understand. Unfortunately, most systems are complex. Most systems, most things are dynamic. They interact with their environments, losing pieces here and gaining pieces there, yet somehow the pattern sticks around. Which is what makes them interesting. It's why they have names. And it's why I like having this holistic mental image as a rough approximation. If you try to dig into a complex system to learn how individual pieces interact, you can lose the forest for the trees. But a model of the whole thing, all the pieces and the way they interact, even if it's a poor model it can be useful. If nothing else, it keeps us looking through the right perspective, keeps us at the appropriate level of abstraction to begin to understand the system.

Torus Covered with Nodes [image][103]

So far we've got a torus (donut) with nodes covering its surface, and arrows between the nodes indicating the flow of information, energy, or matter (which are really all the same thing).

Wave Functions [10 min video][104]

If we slice through the torus we can see the circles that represent feedback loops. Inputs to the system come in the top, and outputs go out the bottom, and the system has some "current state", some current set of connections based on previous states and inputs. Now I want to fold that picture back onto itself.

Take that image of the torus as a whole system, with the nodes covering its surface representing the many interacting parts, and shrink it so it becomes just a single node on the surface of a larger torus. Each of the nodes on the surface of the torus has its own inputs and outputs, so each node can be pictured as its own little torus, its own little complex system with interacting parts and feedback loops.

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[103] http://imgur.com/6Pa0bSA.jpg

[104] https://youtu.be/KRRnMS1sm6Y

Torus Fractal [image][105]

Now our mental image can shrink or grow to any scale. Tori built of tori of tori. Tori all the way down. A torus fractal. A scale-invariant mental image. No matter how close or far you get, no matter how big or small you make it, it looks the same.

Maybe you're wondering, why the torus? Why this particular shape? It's the easiest way for me to imagine perpendicular feedback loops, feedback in two dimensions, feedback loops that interact with each other. It gives me the ability to picture infinite infinities, an uncountably infinite set. And it just happens to work for me. Maybe there's some other shape, model or allegory that's better suited for your brain. I think the key is to find some isomorphism that works for you, something with inputs and outputs and feedback, and build it out of itself. Make it a fractal, make it stackable and scalable. Because the universe is composed of fractals, and if we want to understand it, we have to learn to speak its language.

The Fractal Geometry of Nature by Benoit Mandelbrot [pdf][106]

Getting the Shaft – *Aug 14, 2012*

The shaft finally arrived yesterday, August 14th.

New Propeller Shaft Celebration [picture][107]

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[105] http://i.imgur.com/lSYxJwn.jpg

[106] http://bit.ly/1WWjQsv

[107] http://i.imgur.com/h4dkWIR.jpg

After talking to a local sailor we decided to try and save money by installing it ourselves in the water. That way we'd avoid a tow, a haul-out and labor on the installation, which probably would have totaled some $800. I was hesitant at first, but he said, "It's no big deal, your boat's not the Queen Mary." That convinced me, and he turned out right. It only took 4 or 5 hours total, and a lot of that was due to our inexperience.

Underwater Sailboat Repairs [1 min video][108]

I learned a ton in the process, how the shaft fits in the coupling, how the coupling connects to the engine, how the propeller attaches to the shaft, how the stuffing box works, and lots more. All in all, the repair only ended up costing $530… not bad at all for a boat.

As I post this, we're finally about to leave. Nassau's been awesome, but 3 weeks is too long for us sailors. Sovereignty proved aptly named, we lived like true sovereign individuals and never paid off the local extortionists (ie Bahamas Customs and Immigration). We're excited to get underway, back to the deep blue freedom of open waters, and onward to our next adventure. Next WiFi spot will probably be Puerto Rico, but we'll continue clicking the SPOT Messenger daily to give the A-OK.

Towards Little Inagua – *Aug 16 2012*

We left Nassau excited to finally move again after waiting 3 weeks on a new propeller shaft. Some dolphins put on a show for us as we left, leaping out of the water like I had never seen before in the wild. We made great time the first day, sailing with the wind and current up around the Northern point of Eleuthera Island… and then things slowed down. For the next 5 days we fought our way South against the forces of Nature, averaging just over 30 nautical miles per day.

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[108] https://youtu.be/32uGLIwb0Ew

Racing a Ship [1 min video][109]

Because we were sailing into the wind, we had to travel at an angle to our destination. This meant for every mile we traveled, we only made a half mile of forward progress, tacking left and right in a zig-zag pattern to work our way upwind.

GPS Track[110]

It wasn’t a waste of time, though. On August 17th we saw a whale off our starboard bow, and got within 10 yards before it raised fluke and dove for deeper water. Just an hour later we saw a marlin swim right up next to the boat, every feature visible through the crystal clear water. We tried casting at it but it wasn’t interested in our bait.

We were all alone, rarely seeing another boat, never seeing another human, only the occasional plane to remind us of the artificial world we left behind. We zig-zagged our way down the Bahamas Bank, getting a good look at some of the islands and watching some great sunsets. I finally finished A Song of Fire and Ice, and had plenty of time to just sit and relish the present moment.

A series of problems hit all at once on the 18th. Ran the bilge pump to empty the water that had collected, but it was coming out much slower than usual. I tried straightening out the hose and running it again, and then the pump head broke. So now we’re just using the manual pump, but since I adjusted the stuffing box in Nassua when we installed the propeller shaft the bilge fills very, very slowly- just a few drips per minute (necessary to lubricate the shaft). Later I went to turn on the running lights and discovered they wouldn’t come on, played with a voltmeter on the wires and everything seems to be connected, so it might be the bulb that went out… which means I might need to get hoisted up the mast. Then we started the engine during a dead spell, but the starter button got stuck down and blew the fuse. That one was actually an easy fix, just cut a piece of wire to connect in place of the fuse and she started right up.

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[109] https://youtu.be/uZh0YLjsVkY

[110] http://i.imgur.com/RZesMXh.jpg?1

Fixing the Fuse [picture][111]

After slowly making our way South for 6 days, the wind shifted and increased (probably due to Hurricane Isaac), propelling us towards Little Inagua at about 5 knots. We covered 80 nautical miles that last day, actually went too fast and had to slow down so we could approach after sunrise.

Bustin' Five Knots [1 min video][112]

Anchoring was easy, there’s a real nice spot just west of the northernmost point, a sandy bottom for an anchor to dig into, littered with living and dead coral . The transparent water made it easy to judge depth. I threw on a snorkel and held onto the swim ladder as Jared idled towards land, and I called out directions to a secure-looking spot. We dropped anchor in 20 feet of water, about 100 yards from shore, and I swam down to bury the anchor with rocks, just to be safe. There I was startled by a 3-foot black tip shark who came within 10 yards, but he just looked for a minute and swam off. I put 5 or 6 20-lb coral-rocks on the anchor and felt pretty secure, swam back to get ready to go ashore.

Surreal. I’ve dreamed of visiting this island for almost a decade, ever since I stumbled across it on Google Maps in High School. I knew all about it, size and location, elevation, coral reefs, flora and fauna: dry shrubs, royal palms, wild goats and donkeys, but being there was something else. A real deserted island, a place few other humans have ever touched and where no one else would be. I couldn’t wait to get out and explore.

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[111] http://i.imgur.com/775duQr.jpg

[112] http://youtu.be/_iY0TfTSzs8

On this side of the island the ocean floor drops steeply away so there isn’t a big reef to worry about like on the northeast coast, but it also means there’s no sandy beaches to make an easy kayak landing. We paddled towards the most promising spot, but it was still a rough landing on some ancient coral. We struggled with our gear for a minute and got a little wet, but we eventually wrestled the kayak out of the water and up the slope.

We started walking southwest along the beach, eating up the sights. So much cool stuff to see- huge piles of boulders in place of dunes, a great variety of fossilized coral along the beach- porous, sharp and jagged, smooth and dense, coral fans and coral shafts, along with conch and snail shells, tiny palm trees, coarse sand made of broken shell fragments,

a wave cave with a hole in its roof [30 sec video][113],

salt crystals growing in rock pools [picture][114],

a thickly vegetated interior [picture][115], and doody everywhere [picture][116].

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[113] https://youtu.be/LB5jIrh_Q2M

[114] http://i.imgur.com/Z4TmVYF.jpg

[115] http://i.imgur.com/c99RcsG.jpg

We walked about 3 miles down the beach, trying a couple times to work our way inland but the brush was too thick. The original goal was to climb a hill near the southern edge of the northwest coast so we could get a better view of the island, but a few hours in we noticed storm clouds growing in the distance and decided to head back. Jared said, “If I had to guess what the edge of a tropical storm looks like, I would say like that.”

I was hoping to see a goat or donkey while we were on shore, or at least signs they really existed, but I never expected so much dung. Great piles of it along the beach and along game trails. We tried following the trails, looking for a source of freshwater, but didn’t find any the first day. We found a pool just inland of the northern point surrounded by converging game trails, but it turned out to be salty. Exhausted from the hike and the heat, we paddled back to the boat, thinking we’d have more time to explore the next day.

Unfortunately, a hurricane kept us from returning to shore. We didn't know it was a hurricane at the time, since we had no form of communication with the outside world, but we could tell a storm was coming. The clouds were racing above us when we got back to Sovereignty, and the wind and waves grew as the sun set. I got a little worried about the anchor holding so I slept on deck where I could listen and glance at it, but it held like a champ and I slept easier later on after seeing what it could sustain. The wind was blowing around 30 knots at times with gusts up to 35 or 40, but our position close to the leeward side of the island kept the waves from building very high- maybe 4 or 5 foot max.

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[116] http://i.imgur.com/TQy3fuM.jpg

Hurricane Isaac Near Little Inagua [1 min video][117]

Wind, waves and rain waxed and waned over the next couple days, and we sat it out on Sovereignty in our Little Inaguan anchorage. We couldn’t do too much, didn’t want to risk kayaking away from the boat in case the storm got worse. Once we were convinced it was over, we got out and snorkeled.

The seafloor is even cooler than the coastline, and we were on the boring side. We saw little coral formations everywhere, and a few large ones in the deeper water, divots in the floor that held sediment and debris like underwater ponds, tons and tons of fish, big rocky areas, big sandy areas, and a couple barracuda who followed us around. We tried spearing them and a couple other fish, but no luck.

Snorkeling off Little Inagua [5 min video][118]

(The water was actually crystal clear, it’s just our foggy camera lens that makes it look murky.) After an hour or so we swam back, hauled the kayak back onboard, pulled up the anchor and motored away to the North. I can’t wait to go back.

Photo Album[119]

Haiti – *Aug 28, 2012*

After spending 12 days away from the artificial world traveling to

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[117] https://youtu.be/MtxyojDNwyc

[118] https://youtu.be/ass4eEJN108

[119] http://imgur.com/a/C0BTx

Puerto Rico from Nassau, we decided to make a pit stop to stretch our legs, talk to some other humans and buy some fresh food. First we tried for Turks and Caicos, but I hadn't been able to find the large scale maps online. I had some low detail versions, but I knew the Caicos Bank was shallow and full of shoals, so we decided to get there during the day and play it by ear (sight). Approaching the bank, we saw a distinct line where the water changed from deep blue to bright sea green.

Jared went up to the bow to see if he could spot the bottom, and I stayed at the helm watching the depth meter. Running the engine to give us more control, I slowly drifted over the edge and saw the depth meter flashing below 10, so we aborted. Turned south to head towards Hispaniola, and a 2 day voyage across the Windward Passage.

Everything went smooth for a long time, good strong winds (albeit not in the best direction), then we had another string of problems hit us all at once. The mainsail developed a rip just below the second reef point, caused by my own mistake. I had pulled the reefing line in slightly (a rope that reduces the area of the mainsail, for use in heavy winds) to try and keep the sail from luffing (flapping). It worked, but it also must have strained the seam until the rip developed. Probably a couple hundred dollar error, but I learned my lesson.

The winds were still strong and we were heeling (leaning) heavily when we started getting hungry for dinner. The propane grill is gimballed so it will always stay upright, but the hose connecting it to the propane tank is a little short and keeps it from rotating far enough when we're on a port tack (wind coming over the left side). This had never been a problem, the food would just be slightly deeper on one side of the pot, but it also meant the grill was pulling away from the propane hose. So when we hit a big wave and I bumped the stove, the hose got yanked out of the grill and started spewing propane. The gas caught from the fire under the cooking pot, and a 3 foot flame erupted in the galley.

I immediately went for the fire extinguisher, ripped it out of the wall only to realize that even if I put the fire out, there would still be propane filling the cabin. So in an instant I dropped the fire extinguisher and leapt up the stairs out of the cabin and across the cockpit to turn off the propane at the source. The fire lasted less than 10 seconds, but it was enough to put a burn mark on my ceiling and give me a healthy reminder of the dangers of fire on a boat.

With dinner still only partially cooked, we decided to pull in the jib to reduce our angle so cooking would be safer and easier. I'm still not sure why we didn't just take down the main, considering it was already ripped, but the jib seemed like it'd be easier since it's on a roller furling system. Wrong again. The furling system must be getting corroded, even though we applied WD-40 not too long ago, and it was a huge pain to furl the jib. The bearings got stuck every few turns, so we had to pull the sail partially in-and-out, over and over again before it finally went all the way in. We finished dinner, then realized we should trade the main sail for the jib and prevent the rip from growing.

Still under pretty heavy winds, I climbed up on the deck to take down the main only to lose 2 bungee cords and my hat overboard in the process. Turns out bungee cords sink, but my hat didn't, so I quickly took the iPhone out of my pocket, lowered the swim ladder and leapt in after it. Once I saved it, we used a rope in place of bungee cords to wrap up the mainsail, then re-opened the jib and resumed our course. All this in the dark, too.

The whole way across the Windward Passage we had trouble making much easterly progress due to the easterly wind, but we were flying south aimed right a Cap-Haitien, a large city on the North coast of Haiti. So we decided to stop by and see what it was like. I still didn't have detailed maps, but we figured we could get close enough to find channel markers and then follow them all the way in. Around noon we saw little specs above the horizon and started heading for them, thinking they were signposts. Eventually we realized they were moving, and later figured out they were small sailboats, and we followed them all the way into port.

Hispaniola is gorgeous. Tall mountains and cliffs going right down to the ocean, a beautiful silhouette against the sky, and a nice change of pace from the low-lying Bahamian islands.

Hispaniola [picture][120]

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[120] http://i.imgur.com/pDpEhDS.jpg

We slowly motor in around 1pm, still unsure where we would dock. I didn't really feel comfortable leaving the boat at anchor here, considering most local sailors used paddleboats with makeshift sails. We were trying to avoid Customs again, but found there was really only one pier in Cap-Haitien. So we motored closer for a better look, and some dockworkers started waving us in. They point for us to dock alongside a rusty old pilot boat and helped us tie her up.

The dockworkers looked excited to see a pleasure boat with Americans, and they all tried to help us looking for a tip. One told us he'd run and get Customs. Turns out they have an office right at the end of the pier, so we couldn't avoid being extorted this time. Another worker spoke fluent English, and introduced himself as "Ketchup".

Since this was an impromptu stop, we didn't have the customs paperwork, and the officials didn't speak English. Ketchup was a life-saver, he translated and told us to get our story straight: we were having problems with the boat and couldn't make it to Puerto Rico without stopping. They asked us a bunch of questions, and then went off with our passports to talk with "the boss".

Talking with "The Boss" [picture][121]

It was a tense couple hours, we had to stay on the boat talking to Ketchup and Gary, but after more questions and showing them my boat's documentation we were free to go. We just had to pay the "agent" a $300 cash bribe, which he pocketed right in front of us.

Expensive, but I really appreciated this honest form of extortion. We all understood exactly what was happening, and no one tried to justify it with propaganda like they do in developed nations. It was right out in the open: this man, "the agent", could give orders to men with guns to kidnap us and lock us in a cage. The threat was obvious, and we could choose to pay him off, or go to jail. Everyone could see we were being extorted.

Every tax, fine, law, tariff and duty in the world is the exact same situation. They're simply threats backed up with violence. A choice between compliance and imprisonment, and a choice between imprisonment and execution. But most of those threats are hidden under layers of abstraction and legalese. Concealed by euphemistic word-choice and made easier with years of indoctrination, until people are manipulated into believing the extortion they submit to is just and warranted. It was nice to have the situation presented so clearly for once.

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[121] http://i.imgur.com/2B1NugK.jpg

Afterwards, Ketchup showed us around town and Gary agreed to watch the boat for $20. Our first stop was cold beer at this crazy computer part store/restaurant. The local beer is called Prestige, and it's pretty delicious.

First Beer [picture][122]

After that we went to the grocery store, but everything was too expensive. We ask Ketchup where we can get local food, and he hails two moped taxis for the three of us. I hop on the back of the first moped, while Jared and Ketchup squeeze onto the next one, and then we were off across the city to the market.

Jared and Ketchup on a Moped Taxi [picture][123]

Before we went to the market, Ketchup let us peek inside his nearby apartment. We didn't go very far in, but it didn't look like there was far to go. The entryway was the size of a walk-in closet, with no furniture that I could see, dark and filthy. Then we walked across the street towards the hundreds of people selling their homegrown food and products.

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[122] http://i.imgur.com/ENEG1Cq.jpg

[123] http://i.imgur.com/3akBVVf.jpg

Haitian Agora [picture][124]

Crazy smells, crazy good deals, crazy amount of people. Local farmers selling mangoes, potatoes, onions, carrots, melons, spices, bread, bananas, and charcoal. It turns out the smoke we had seen on the hills was from people making charcoal which they sell in the market. Several streets were lined with people selling their goods, most of them women, laid out in front of them on flat boxes on the ground, people shouting prices and carrying things here and there. Ketchup helped us pick out some mangoes, bananas, potatoes and onions, haggling over prices and trading out some rotten fruit. We got a pretty good amount of fresh food for ridiculously low price, then took another moped-taxi back to the computer-store/restaurant for another round of beer.

There Ketchup told us more about himself, how his real name is Thomas Samson and he grew up in Miami thanks to a mission that brought him from Haiti. He returned to Haiti as a young man, and lived there ever since. He looked to be about 35 years old, but he produced his ID to prove to us he was actually 51. He told us how ignorant the government officials were, how few of the customs officials spoke anything but French while he, a dockworker, spoke 4 languages. He told us how the UN agents who came after the earthquake were even more corrupt than the old officials. He expressed his desire to leave, to one day live in the Bahamas, but that he didn’t have the money to travel.

We decided to try the food there, and ordered a little of everything: fried chicken, fried plantains and pasta covered with ketchup and mayo. Not too bad.

After dinner we went to the “net”, a pay-per-hour internet “cafe” (a room with a dozen computers, slow internet and no A/C). We checked the weather report and communicated with family. We only paid for 30 minutes, and by the time that was up it was getting dark so we decided to head back to the boat. We gave Ketchup $50 for his help, and agreed to give him more the next morning if he could buy us a case of Prestige. We felt pretty safe at the dock, behind two barbed-wire fences and with guards present the entire night. We ended up giving Ketchup another $50 in the morning, and he helped us fill up water jugs and check-out with the police. We exchanged phone numbers and said farewell, headed back out to the open water.

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[124] http://i.imgur.com/XcgDmfz.jpg

Photo Album[125]

Haiti to Puerto Rico – *Sep 4, 2012*

Jared and I left Cap-Haitien, Haiti on August 29th with a case of local beer, Prestige, and a bunch of produce from the open-air market. Good thing too, cause we were running low on canned foods. We duct taped the main sail along its rip; I didn't think it would last long but it was worth a shot. Actually, it wasn't. We used up most of a roll of duct tape on it and it completely ripped through again within a few hours.

We were expecting about a week's journey to San Juan, counting on books to fill a large portion of that time. Unfortunately for Jared, a wave splashed the cockpit and ruined his Nook on the first day. I think he was about ready to die after that.

We hugged the North coast of Hispaniola, zig-zagging upwind but never straying more than a dozen miles offshore.

Tranquility. The landscape was incredible and the atmosphere put on a dazzling show every night at sunset. That's not common either. Landlubbers may not know, but I'd say only 1 in 3 sunsets is very good, and we got 7 in a row.

The wind died the morning of the second day, so we started the engine to maintain progress. After 10 minutes I noticed the temperature shot up. I killed it, and checked the coolant. Bone dry. I refilled it and ran it again. 10 minutes later and it was hot again. The coolant was leaking. Sails only from then on.

My freshwater tank doesn't have a gauge. It was full when we left Nassau, 90 gallons, and we must have had at least half remaining, but the water came out green and silty. We filtered it through paper towels and boiled it, a labor and time intensive procedure which definitely kept us from wasting water.

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[125] http://imgur.com/a/hMO8B

Jared was starting to get a little stir-crazy. The wind would come and go, but after experiencing the doldrums for 3 days before Nassau every time it stopped he would start thinking the worst. I told him the key was to not care when we arrived, but I suppose that's easier said than done.

We arrived in San Juan just after sunset on September 4th, unsure where to anchor and leaking freshwater coolant. We added a gallon whenever the temperature gauge started to rise as we motored up San Antonio Channel. At the end of the channel we found a marina, and decided to pull the ol' “dock after they close and leave before they open” trick. We passed by a man on large sailboat at anchor who yelled out “Welcome to America!” and reassured us it would be fine to dock overnight at the marina. It was past midnight by the time we went ashore, but we weren't at all tired, so we walked to Denny's for some hot food and a bar for some cold beer. The bouncer patted me down and found my Taser, which he held onto while I was inside, but he returned it when we left and we walked back to the boat for some deep sleep.

Chapter 5

Puerto Rico Part 1

When I first arrived in Puerto Rico, I wasn’t sure where to go next. In some ways I felt like I accomplished my goal; I sailed to Little Inagua just like I had planned at the age of 16. But I didn’t find any fresh water. I didn’t know if it could support a colony. As of my second day in Puerto Rico, my plan was to start heading back.

September 5, 2012 · Facebook

Starting the trip back in a week or two, just gonna hit some of the virgin islands then start the 1-1.5 month trip to TX

September 7, 2012 · Facebook

Anyone wanna fly out to Puerto Rico and sail with me back to Texas? It'll be like a 1.5 month trip, flight's probably $2-300, probably need $2-300 for food and supplies, we'll stop by some islands and Key West on the way. It's gonna be fun!

September 11, 2012 · Facebook

Decided to stay in San Juan for a little while, try to find a job and make some money for boat repairs.

I spent my time with Jared and his family until he he flew back to Texas. Jared's dad grew up in Puerto Rico, and his grandma still lived there. We walked all over exploring the city of San Juan, rode the train to his grandma’s house, and took his dad out on the boat even though my freshwater coolant was still leaking. We carried gallons of water to pour into the coolant tank as the engine was running.

It was a beautiful day for a sail, but first we struggled to unhook Sovereignty’s anchor from a mess of rope and chain before we could leave the anchorage. We sailed out near the entrance to the harbor, passing huge ships and dolphins along the way. On the way back, I couldn’t get my engine to start. I opened the hatch to the engine and played around with the battery connections, but the starter would barely turn over. Luckily Mr. Reyes took my place in the cramped engine compartment and tightened the battery leads as tight as he could, then the 30 horsepower diesel roared to life. We motored back and I dropped them off on shore before returning to anchor. Jared left a few days later, and I began to spend my time exploring San Juan alone. I soon found El Centro de Convenciones, which became my "personal university".

The Convention Center – *Sep 13, 2012*

Found my new WiFi hotspot. 15Mb/s downloads, 5 minute walk from my anchorage.

El Centro de Convenciones de Puerto Rico [picture][126]

My dad flew out to visit me the following weekend. He questioned some of my ideas about government but gave me his love and support. We took his rental car on an adventure into the heart of the island, and left me with a $100 gift card to Sizzlers.

A few days later I was waiting on a bus, watching Game of Thrones on my laptop when a guy taps me on the shoulder. He said something along the lines of "What the hell are you doing, you're gonna get that thing stolen, you can't have a laptop out around here are you nuts?"

After putting my laptop away and thanking him for the advice, we started talking about Game of Thrones and then my sailing adventure and within a few minutes we were fast friends. He invited me to hang out at his waterfront apartment and I invited him to come hang on the boat.

Photo Album[127]

A few days later on September 23, Carlos and I helped his friend Steven move his motorboat from San Juan to Fajardo. Steven had a small, fast cabin cruiser and we raced across the waves outside of San Juan harbor. Soon they were tossing us in the air, and after a few big ones slammed us around the cockpit we decided to slow down a bit. About 30 minutes into the trip, we hit another wave and the engine died. Suddenly we were adrift in the ocean with no means of propulsion, a serious issue.

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[126] http://i.imgur.com/2UFze0q.jpg

[127] http://imgur.com/a/qutnu

We looked in the engine compartment but couldn’t see any obvious problems. Steven tried and tried to restart it to no avail. Luckily he had a Sea Tow subscription and we were still within cell phone range, so we called them up and they towed us all the way to Fajardo, free of charge. A little further from shore and I'm not sure what we would have done.

Steven’s boyfriend Javi picked us up in his car from Fajardo and we drove back to San Juan. A few days later, after a mechanic fixed Steven’s engine we took it on a longer trip to the nearby island of Culebra.

Photo Album[128]

While I explored Puerto Rico and made new friends, I kept thinking about freedom and posting essays on sailboatdiaries.com.

It’s Already Anarchy *– Sep 24, 2012*

Video Version of This Post [3 min video][129]

It's already Anarchy, we’re just doing a bad job of defending ourselves. Anarchy is not a particular social structure. It is a perspective. It’s the recognition that aggressive coercion is neither necessary nor beneficial. It’s a moral code that shapes our perception of the world around us. Anarchy is a way of seeing society, not a type of society.

Many make the mistake of thinking something has to change in order for anarchy to emerge, that anarchy means a land without government. This fallacy traps people within the statist paradigm. A government is no more than the most powerful aggressive organization in a territory. Anywhere aggression exists, there is ‘government’, whether it’s Al Qaeda, the mafia, or a modern constitutional democratic republic. Government will never be eradicated because aggression will never be eradicated.

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[128] http://imgur.com/a/HwVWC

[129] http://youtu.be/VDC1sAgYWiQ

“In this world nothing can be said to be certain, except death and taxes.” **– Benjamin Franklin**

Franklin should have said “In this world nothing can be said to be certain, except death and the threat of taxes.” People will always try to rob us, that is an unfortunate truth. But we get to decide how we’ll respond. The threats will always exist, but it’s up to us whether we acquiesce or fight back.

“Proud men might shout that they would sooner die free than live as slaves, but pride was cheap. When the steel struck flint, such men were rare as dragon’s teeth; elsewise the world would not have been so full of slaves. There has never been a slave who did not choose to be a slave. Their choice may be between bondage and death, but the choice is always there.”

– George R.R. Martin

We must overcome fear and make the right choice. The only way to reduce tyranny is to oppose tyranny. Oppression cannot be legitimized and controlled. There is no system that can harness aggression for the greater good. It is a Fundamental Flaw. Extortion is always wrong, no matter what is done with the proceeds.

“Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take; but as for me, give me liberty or give me death!”

– Patrick Henry

We’re already living in anarchy. Nothing has to change, we’re already there, we’re already free. We just have to decide what we’re going to do with our freedom.

Self-Education Outperforms Teaching *– Oct 2, 2012*

Final Report [pdf][130]

*“**Students in online conditions performed modestly better, on***

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[130] http://1.usa.gov/1yvyk4P

average, than those learning the same material through traditional face-to-face instruction. *Learning outcomes for students who engaged in online learning exceeded those of students receiving face-to-face instruction, with an average effect size of +0.20 favoring online conditions. The mean difference between online and face-to-face conditions across the 50 contrasts is* ***statistically significant at the $p < .001$ level.***

The effectiveness of online learning approaches appears quite broad across different content and learner types. Online learning can be enhanced by giving learners control of their interactions with media and prompting learner reflection."

So stop forcing us to go to school. Not only are you not helping us, you're hurting us. Kids are naturally curious and love to learn, just grant us the freedom to do so. We could still use some guidance and feedback...

"Effect sizes were larger for studies in which the online instruction was collaborative or instructor-directed than in those studies where online learners worked independently."

… but everyone needs to be in charge of their own curriculum. Otherwise you're forcing people to learn things they don't want to learn, and that's simply indoctrination.

Complexity and the Future of Learning and Education [1 hr video][131]

Flying Home for the Holidays *– Oct 4, 2012*

I told my parents I'd love to come home for the holidays, but I didn't think I could afford to fly to Houston and back. They said they would buy me me a ticket for my Christmas present and we scheduled the flight for November 13, 2012, a day before my brother's birthday.

A New Perspective on Higher Dimensions *– Oct 7, 2012*

I've been trying to imagine higher dimensions. Like a Flatlander trying to ponder "up".

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[131] http://youtu.be/w6jkTV_t4ew

Flatland by Edwin Abbott[pdf][132] Flatland the Film [1.5 hour movie][133]

It's fun to try and think of something perpendicular to three perpendicular lines. Unfortunately our brains aren't built for picturing more dimensions, so I've been trying to figure out a way to cheat. I want to find an isomorphism between a higher dimension and something I can imagine. Something that works like a dimension, a variable that moves along a number line, that I could use as a rough analog for another direction. My thought is to use the scale of perception, like the sliding perspective of this video:

Scales of the Universe [3 min video][134]

Since there can be many different systems in the same place at the same time just depending on which scale you look at, it started to make sense to me to think of it as another coordinate. I'm picturing that slider as an infinite line existing at every point in the three dimensional universe, but it doesn't point in any of the three directions. It's a line that's perpendicular to the three spatial dimensions, it doesn't project onto the Cartesian universe, it's linearly independent of our standard dimensions. So mathematically it works. If we use the exponent on that sliding scale as our variable, it varies continuously from negative infinity to infinity, so we can treat it just like a spatial dimension.

It's easy to imagine the scale dimension as another coordinate. If you want to look at any object or event in the universe, you really need at least 5 coordinates:

1. The time
2. X coordinate

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[132] http://www.geom.uiuc.edu/~banchoff/Flatland/

[133] https://youtu.be/eyuNrm4VK2w

[134] http://youtu.be/uaGEjrADGPA

3. Y coordinate
4. Z coordinate
5. Scale of Perception

It wouldn’t be enough to be told to look for something at a specific latitude and longitude on the Earth’s surface at a specific time, you still need to know whether to bring a telescope or a microscope.

I have to emphasize this is just a thinking trick, just an analogy that helps me imagine something I really can’t imagine. I don’t really think scale is the fourth dimension, I’m not even sure what that would mean. But I think it works the same mathematically. And all we really need is an idea that works the same mathematically to construct a helpful isomorphism.

We can use this trick to get to even higher dimensions. We just have to think of things that vary continuously along a line, and imagine that line as existing at every point in the lower dimensions. They don’t even have to make sense, they just need to work mathematically. I can think of several more: rate of perception (frame rate), brightness, speed, happiness, wealth, intelligence. I don’t know what it means for a point in space to be smart and rich, but I can imagine them as independent variables going off in perpendicular directions…. sort of.

It’s a lot easier with scale for me. I practice mentally zooming in-and-out a lot, so I can imagine that sliding scale of perception existing everywhere. But, like just about anything, you have to find an isomorphism that works for you. When it’s too difficult to understand something outright, we just have to figure out something analogous that we can understand and exploit the relationship. [I tried to use this same trick to understand the fundamental limit of knowledge in Gödel’s Incompleteness Theorem.]

Seeds of a Self-Propagating Meme Basket *– Oct 9, 2012*

How can we change the behavior of a society? We've been trained to follow a certain formula:

1. Find some set of rules that, if followed by most individuals, would result in the social behavior we'd like.
2. Get those rules written on a piece of paper that serves as instructions for men with guns.
3. Have the men with guns enforce our rules.

There are several fundamental flaws with this approach. Because it's a formal system, there are certain beneficial rules that are impossible to find. Like “don't threaten non-violent people with violence.” Since every single rule is enforced by threats of violence (it's hard-wired into the nature of the apparatus), this potentially beneficial rule is ruled-out, along with many others. This has to do with Godel's Incompleteness Theorem, and the inherent limitations of formality. There is a better way:

1. Find some set of **beliefs** that, if held by most individuals, would result in the social behavior we'd like. This is our “meme-basket”.
2. Then, include within that meme-basket the idea that it's good to spread the meme-basket to others. This is why the meme-basket is “self-propagating”.
3. Figure out a way to plant the seeds of our meme-basket in as many people as possible.

Now we just wait, and reap what we sow. Learn from our mistakes and try again. Because we're working with beliefs instead of rules, the system is flexible. We avoid the pitfalls of Incompleteness by doing away with the formal apparatus. It also empowers each of us to improve society, without having to harness distant power centers. We can change the world simply by influencing the people around us.

Of course, finding the right seeds is hard, and making them germinate is even harder. It's easy to think of what people shouldn't do. It takes a lot more creativity to imagine what beliefs would encourage people to do the right thing. And most people's intellectual gardens are overrun with weeds, thorns and impenetrably hard topsoil. People are convinced that the formal system they learned about as children is the best way to change society.

These ideas are rooted deeply into people's sense of self, and have grown so large without competition that they block out the sun and the rain. We have to hack away with logic, evidence and Occam's Razor, guard ourselves against emotional backlash, till the soil with imagination and inspiration, water the seeds with encouragement and wait with patience. When they finally sprout, the rays of Truth will shine down on them and soon the meme-basket will grow by itself. Then it's just a matter of time until it reaches maturity and propagates to another garden.

This is how we change the world.

Galactic Viruses – *Oct 12, 2012*

Darwin's dangerous idea tells us not only where we came from, but where we're going. On a galactic timescale, we're early. We must be among the first life forms in the Milky Way, at least relative to its lifespan of a trillion years. What we've seen play out on Earth is predictive of what will play out in the galaxy on a longer scale. That means it will be dominated by viruses.

Almost all of the genetic material on Earth codes for viruses. They are the most effective replicators. There's no reason to believe things will be different on a larger scale. It's likely every galaxy will endure perpetual war between the parasites and the producers. But no matter how effective the parasites are, they're engaged in a Sisyphean effort. They may enslave the producers, master and control them, but they can only extract so much. Exact too high a toll and the producers produce less. Any victory would be Pyrrhic, but viruses don't care. The dance of replication strategies will go on for trillions of years.

Minute Meditations – *Oct 14, 2012*

I think a lot of people have the wrong idea about meditation. It doesn't have to be this long, formal, intense thing. In fact, thinking about it that way is counter-productive. The idea is really just to shut down your language center and become more mindful. You don't have to sit with your legs crossed. You don't have to repeat a mantra or close your eyes. You can take advantage of spare minutes throughout the day to broaden your awareness and strengthen your mind.

I do this all the time. At the bus stop, waiting in line, sitting in traffic, relaxing on the couch, laying in bed. It's easiest at sea. I meditated for hours on end- watching the clouds, hearing the waves, smelling the salt, feeling the motion of the ocean, without resorting to words. But you don't have to leave land to improve yourself.

Make your mindless moments mindful. Broaden your awareness, restructure your brain, rewire your sense of self. The evidence for the effectiveness of meditation is overwhelming. I could personally attest to the benefits I've experienced, but I know self-reported anecdotal evidence is completely untrustworthy. So let's look at the science.

You probably already have moments where you stop narrating. Zoning out. Day dreaming. That's half the battle, the second half is simply recognizing and harnessing them. The hardest part, at least at first, is becoming aware without telling yourself you're aware.

“Hey, I'm not narrating right now.” Woops.

There are all kinds of tricks for entering this state of mind without forming words. One is to make your language center think that breathing is talking. Force yourself to believe that inhaling is a word, and exhaling is another word. Breathe in. Breathe out. But without thinking verbally “Breathe in. Breathe out.” The *sound* of your breath is the word you're forming. Or focus your attention elsewhere. Become acutely aware of your present experience. Every sensation, every sound, every smell. Try to immerse yourself in the moment. How many distinct audio channels can you hear? What can you see in your peripheral vision? Or if your eyes are closed, can you see any Closed Eye Visuals? Can you see the noisy background of your visual field? What do you feel in your toes, your legs, your chest or your hands? Can you feel your breath in your nose, the rise and fall of your chest? Experience the world outside the narrator.

Once you've turned off the word-maker and become more aware, the last step is to stay there. Ideas are going to pop up. Your language center doesn't like being ignored, and it's adept at quietly sneaking back into your consciousness. The key is to objectify without judgment. Take any idea that emerges, and turn it into just another object of your attention. And most importantly, don't feel bad about it. Treat your own words as if they were the wind brushing your face, or a car humming by. Take the thought, look at it for a moment, then let it go. Don't judge yourself or the words you experienced. It's just another thing outside yourself to take interest in, to be mindful of, but ultimately fleeting and irrelevant. We meditate in the moment, without concern for the past or future. Be present in the present.

In Pursuit of Arete – *Oct 17, 2012*

In the United States, people are familiar with the phrase “the pursuit of happiness”. But is that really the best goal? After all, that's what heroin junkies are pursuing. We could imagine living in the Brave New World where soma is used to make everyone happy without side effects. Or a future where brain surgery makes everyone perfectly content with their lives at all times. I doubt many of us would sign up to live in that world. So if happiness isn't the goal, what is?

Arete is a Greek word that roughly means excellence, or virtue. Effectiveness. Honor. Duty. Dharma. Reaching one's highest potential, the fulfillment of one's purpose. Being the best you can be. It involves all aspects of life. Well-rounded achievement. It requires contemplation and action. Courage and self-control. Intelligence and passion. Knowledge and skill. Quality. This is what we should pursue.

“What moves the Greek warrior to deeds of heroism is not a sense of duty as we understand it... duty towards others: it is rather duty towards himself. He strives after that which we translate 'virtue' but is in Greek arete, 'excellence'.

Quality! Virtue! Dharma! That is what the Sophists were teaching! Not ethical relativism. Not pristine “virtue” but arete. Excellence. Dharma!”

– **Robert M. Pirsig**

Inspired by *Zen and the Art of Motorcycle Maintenance*, my new favorite book.

Reverse Engineering Religion – *Oct 18, 2012*

Religions are great institutions for lots of reasons. Like I wrote in “Let’s Have Religions without Faith”, they perform a large number of useful, beneficial social functions. They only suffer from one major flaw, faith, but it's a deal-breaker. So let's see if we could imagine a rational religion. Let's look around the world at all the positive aspects of these organizations, and see if we can't construct a new one that keeps the good but disposes of the detrimental faith meme. The best part is, since we wouldn't encourage people to adhere to this religion without regard to reason, people would be free to modify and improve the institution to overcome any shortcomings. The best versions would grow and the worst would fail: variation and selection. A religion without faith would evolve by a process of natural selection to better meet the needs of its constituents.

So where to begin? I think one of the most important pieces of religion is ritualistic gatherings. Of course, you don't need faith to do that. It's perfectly rational to get together with your community every so often. OK, when should we do it? At some level it's gotta be arbitrary, but we've got a big time-keeper orbiting the Earth that I want to make use of. Let's have our Church of Reason meet on every new and full moon. That's about once every two weeks, a little less than most religions today, but maybe people would be more likely to attend that way.

But what are we going to do? There's no good reason to worship a 1st century carpenter or a 6th century cave-dweller, but it's certainly rational to reflect on their good ideas. We could use the opportunity to think about ethics, history, ourselves and our society. Maybe we could hold guided meditations, community discussions, philosophical presentations or ritual performances. We could express our gratitude towards others and the universe, express regret and do penance for shameful acts, collect donations for community projects, even sing and dance and share a meal. And if we want to make use of symbolism, we could hold this *reflective* ceremony on the night of the full moon.

That leaves the new moon, a night when the atmosphere is dark and we can see more of our galaxy. That sounds like a great day to rejoice in awe of our place in the cosmos. We could repeat some of the rituals mentioned above, but focused out instead of in. We could share our knowledge of the world around us, and the means for obtaining it. Kids could hold science fairs, adults could present research, and people could debate the meaning of evidence. We could hold lectures, look out through telescopes and down through microscopes. We could practice taking new perspectives. People could use this opportunity to forget themselves and remember the beauty of nature.

Look in, look out. Breathe in, breathe out. It's got a nice rhythm to it.

I think religion as it stands does more harm than good, but I don't want to throw the baby out with the bath water. I just want to take the baby out of the stagnant holy water, clean her up a bit and help her adapt to a different world. You don't need faith to accomplish anything good. Its only effect is to hinder progress, to slow down the evolution of culture.

Let's speed up evolution. Let's think for ourselves, recognize our mistakes and improve our social institutions. This idea I sketched is a jumping off point. Try to imagine your own ideal religion. What ceremonies would you keep, and what would you modify? What aspects of religion would you like to see improved? You don't have to blindly trust someone to see the good ideas in this world, you have the power to recognize quality all by yourself.

We're going to need some leaders to get something like this going. We don't have to frame it as a religion, that might have a negative effect on turnout, but what we call it doesn't really matter. Get some friends together and hold a backyard BBQ, or maybe a campout or pot-luck dinner. Try to incorporate the positive parts of religion in the community events you already attend. Bring up ethics at dinner parties, get people to think about science and beauty. Nobody really has faith. We always believe things for reasons, even if we don't acknowledge the reason. We're all able to recognize good ideas. Help spread them.

The Overlapping Circles of I – *Oct 25, 2012*

‘I' is an interesting word. It frames the way we think about ourselves, and it certainly seems well defined in everyday usage. But I'm going to argue that it's ambiguous. It depends on where you draw your circle.

“I am the body that produced this sentence.”

“I am the brain that produced this sentence.”

“I am the neurons that produced this sentence.”

All of these statements are true. And they refer to very different things, orders of magnitude different in scale. My body is composed of some 10 trillion cells, but not all of them were used to make this sentence. A lot of them sat idly by while others worked on its production. You could cut off all my limbs, even my torso, and if you kept pumping nutrient-rich, oxygenated blood through my brain, I could still produce the sentence. My brain is about 100 billion cells, two orders of magnitude smaller than the body. But still, much of my brain isn't involved in language production. My cerebellum keeps me on my feet when I walk, but it didn't produce this sentence. You could cut out much of my brain and I would still be able to think these words. The sentence is formed mainly in a small region called Broca's area, which is probably only about a billion neurons. Another two orders of magnitude smaller than the entire brain. So who am I?

It might be harder to see, but we can scale up too.

“I am the society that produced this sentence.”

“I am the ecosystem that produced this sentence.”

“I am the planet that produced this sentence.”

I couldn't create language if I didn't belong to a social species. This body didn't produce the thought on its own, it takes a network of people for words to bear meaning. Our society as a whole wrote this sentence, almost 8 billion individuals, $8*10^{22}$ cells. But how could this society live without plants and animals to feed on. This sentence couldn't have been produced without the entire food web, probably some 10^{36} cells, and that's only 1/10,000,000,000th the mass of the Earth. But each sentence is true, depending on your perspective. The motion of the Earth's atoms created this sentence. Who I am depends on where I draw my circle.

“I am the Universe.”

Lost in Translation – *Oct 26, 2012*

Using language is tricky business. It seems so natural to us that we rarely think about it. We make these noises at one another and somehow deduce what the other is thinking. We associate sound patterns with models of the outer world. It's really a bizarre evolutionary strategy, but it worked.

Now we can't imagine it any other way. And there's no other way we could imagine it. Our ability to make abstractions and think logically were side effects of speech. Talking introduced a serial processor to our highly parallel brains, forever changing the way we see the world. Now we can't stop categorizing. Consciously and subconsciously we're associating all of our sense data with mental concepts. And the words we use to describe the universe change the way we perceive it.

Language is our lens towards reality, but it's blurry and scratched. Our perspective is dependent on our words, but there is no perfect vocabulary. Language evolves through a pattern of natural selection. The most frequently used words have the highest fidelity, and therefore change the slowest over time. A word's “goal” is to be an effective replicator, not an accurate descriptor. Words don't have to have logical meanings to gain popular usage. They're just the sounds that get repeated the most. They are utilitarian. Words persist if they are useful; logic and truth have nothing to do with it.

We have to be aware of implicit assumptions. Sometimes effective memes are misleading. A speech pattern can get copied even if it paints an inaccurate picture of reality. Every now and then we should take off our language glasses and examine them for defects.

There's one inherent problem we can never get rid of: subjectivity. We treat words as if they have objective meaning, but meaning depends on perspective, and perspective is subjective. Definitions are fluid. Webster will never win. Each of us has a slightly different idea about what words mean. Natural language evolution doesn't stop. That's why clearly defining words is crucial for conversation, but that can lead to an infinite regress. We're stuck describing words with words and hoping we share some common ground.

Our vocabularies limit us in other ways. When we look through language, we see objects. We imagine distinct pieces of reality, different types of things all around us. But that's not how the universe really is. The universe is one big fractally mess. It's one connected space-time fluid, one object, one thing with different properties in different regions. I know I'm bordering on mystical nonsense, but when you look at the smallest scales all you see is an ocean of fundamental particles obeying the laws of nature.

Language forms a windshield constructed from tiny panes of glass, dividing up our picture of the universe into little boxes. But beyond that lens is one swirling soup of energy and matter without any borders. The closer you look at any portion, the more detail you can see. And as you zoom back out, the image just becomes more intricate and complex. Every concept is intertwined with every other concept in the awesome self-similar network of reality.

You live too long in the world of words and you forget how to see the universe.

The Property Perspective – *Nov 3, 2012*

Something's always bugged me about property. It clearly only exists in the minds of human beings. There's no objective way of distinguishing my stuff from your stuff. I can't go look at an acre of land and determine who it belongs to, I have to ask someone. And if I ask two different people, they might disagree. It *must* be subjective. Yet ownership *implies* objectivity. When I say something is mine, I don't just mean “I feel like it's mine”. It's not an opinion statement. I mean “It **is** mine.” You can't have it. That's a contradiction. How can that be?

Contradictions are awesome. They're the most useful problems to stumble across, because they tell us there's a flaw in our reasoning. There are no contradictions in nature, and yet here's a concept with an inherent contradiction. That means our idea must be flawed. Something's wrong with the way we think about property. We need to take a closer look.

The contradiction is not in our physical behavior. There's nothing inherently wrong with the way we move stuff around, no physical laws are broken when we buy, sell or give stuff away. We're not disagreeing with the universe by defending our land. The contradiction is in our understanding of the process. The non-sequitur is in our description of these activities. Our language glasses have another defect. It's a failure of the human imagination to accurately describe what's happening.

To get at the problem, we need to look at what this idea really is. Property is a mental shortcut for dealing with some common social situations. It's a predetermined pattern of behavior that tends to work well for most people most of the time. It's a **meme**.

Property is a really effective meme that evolved with our species. By influencing incentives, it encourages efficiency. By encouraging efficiency, it promotes propagation. And propagation implies prevalence.

That's my most concise, alliteration-filled way of saying that the concept of property tends to spread itself. This set of ideas and behaviors we call “property” encourages the transmission of the ideas and behaviors we call “property”. It's really a pretty cool trick if you're an idea that wants to spread.

Individuals who believe they own property will behave differently than people without this concept. Ownership changes values. People care about the things they own. The don't want to lose them, and often want more of them. So property discourages wastefulness. It incentivizes efficiency, because people who believe in ownership tend to want to own more stuff.

Efficiency promotes propagation. Societies that effectively use their available resources are able to grow their own population, and conquer less efficient societies.

The *idea* of placing higher value on things that *only I can use* **spreads itself**. The **concept** is good at self-replication. People didn't spread the property meme, *the meme spread itself*. And ideas that are good at spreading quickly become the most common ideas.

So it doesn't have to be logical. This concept became widespread despite the inherent subjective/objective contradiction, because it worked well enough in general to promote its own replication. The prevalence of a meme has nothing to do with reason or truth, it derives solely from its ability to propagate.

Once we recognize that, we can look under the hood and see what this concept is really made of. We can break ”property” down into behavioral patterns, the physical processes that don't contain contradictions. What actually happens when we make a trade?

If you try to take my computer, I'll try to stop you. But if you pay me enough, I will no longer stop you from taking it. From the property perspective, it looks like the computer has a new owner. But we know there's a contradiction in that reasoning. Nothing about the computer changed. What changed is my behavior. **You didn't buy my computer, you bought my reaction.**

We don't exchange property, we exchange actions. Atoms don't change when we pay our bills, but behaviors do. My groceries aren't altered by handing the cashier some money, but the security guard acts totally different. Whether or not you call the police when I take something has nothing to do with the object in question and everything to do with your **idea** about who owns it.

The recognition of property has become an evolutionarily stable strategy in our society. Since most people believe in property, it pays to act like property exists.

So is there any good protocol for assigning legitimate exclusive use of scarce resources? When should I help my neighbor defend “his” land, and when should I help my neighbor reclaim land that was “stolen” from him? How can I tell who's right? I don't have an answer at this point. I'm not sure we need a one-size-fits-all solution. Since it's inherently subjective, it might fall on each of us to think long and hard about ethical property distinctions and act accordingly.

There are No Countries *– Nov 8, 2012*

People keep asking what country I'm moving into, what country is more free than the United States. I'm not moving into another country. I'm living outside the country paradigm. I'm living on Earth, that's it. I don't have a nation. I don't have a government. I don't have a country.

Countries don't physically exist. There's only people and ideas, land and water. I didn't physically leave the United States. I philosophically left the United States. I didn't move out of the country. I simply recognized that it was never there at all. It was only an idea. A meme. Only a belief that each of us can accept or reject. I reject it.

I don't see any countries anymore. I don't see any borders. I'm blind to armies and authority. I don't see any policeman or soldiers, politicians or bureaucrats. All I see is people.

I didn't leave America when I sailed out of Miami. I left years ago. Sailing across the Gulf Stream was only a symbol of my awakening.

Money, Memes, and Metals – *Nov 9, 2012*

Few ideas are as concrete and abstract as money. We exchange it every day for real goods and services, yet we all know that its value is imaginary. When people stop believing the dollar has value, it will have no value. So then the natural question to ask is: why *do* we believe it has value?

Money is a meme:

> *"A 'meme' is an idea, behavior or style that spreads from person to person within a culture. A meme acts as a unit for carrying cultural ideas, symbols or practices, which can be transmitted from one mind to another through writing, speech, gestures, rituals or other imitable phenomena. Memes are cultural analogues to genes in that they self-replicate, mutate and respond to selective pressures."* **– Wikipedia**

Like a gene, it's hard to define the borders of a meme. Ideas aren't exactly discrete units, although we can reason about them as if they were.

And like genes, we can imagine ideas to be selfish-replicators, concerned solely with passing themselves on. Of course, memes don't really think that way. They don't think at all. But if you look at the behavior of memes, they *appear* to behave selfishly; they *appear* to *want* to spread themselves. Much like a gene or a virus *appears* to *want* to spread itself. Obviously these entities have no emotions. These are abstractions we use to simplify the physical world. A virus doesn't want to replicate any more than a toilet wants to refill itself after flushing. But the viruses that are best at replicating become the most common viruses.

Exchanging money is a mimicked pattern of behavior. Like most memes, it arose spontaneously and stuck around because it's an effective replicator. Just like The Property Perspective, the money meme influences our behavior in a way that encourages the efficient allocation of scarce resources. The efficient use of resources is what allows the meme to spread.

Money is a form of communication. Societies that adopted money were like brains evolving a new neurotransmitter that allowed the system to self-optimize. Where before information was fragile and only lasted a few hops between nodes, money was durable and capable of traveling the world unchanged.

The flow of currency enabled our network to specialize to an immense degree, since the communication of desires was now possible between far more nodes in the network. Like a brain evolving into functional regions each responsible for a certain task, humans learned to take on a single trade and become experts in their field. Suddenly the entire system was better off. Humanity was smarter, more productive and more resilient than ever. The currency we exchange transfers information at the system-level that allows our societies to fulfill desires, move, learn, plan, focus attention and make decisions. Money fulfills almost the exact same role in an economy as dopamine in the brain.

Humans recognized certain metals as functional mediums for trade very long ago, and for most of human history gold and silver were the dopamine of the masses. These metals have many qualities that are useful for a medium of exchange: they don't corrode, they're easy to shape, and there's a finite supply in the Earth's crust. The limited deposits create a natural restraint on the growth of the money supply. To increase the number of gold or silver coins in circulation requires substantial energy and effort, so the amount available in an economy reflects the productive capacity of the society that uses it.

Originally, a dollar was defined as 24.056 grams of silver with the passage of the Mint Act in 1792. This is very different than a dollar **bill**. The pieces of paper we carry around are not dollars. A dollar is an abstract unit of value that cannot be instantiated. There are no physical dollars anywhere in the world. Those green things aren't dollars, they're dollar **bills**. A bill is a receipt indicating that the holder is owed something. Holding a dollar bill indicates that you are owed one dollar.

So if you held a dollar bill in 1792, it meant you were owed 24 grams of silver by the United States government, which could be redeemed on demand at the Treasury Department, or at any member bank. Over the years, Congress changed this definition to various weights of gold or silver, but a **dollar** was always equivalent to **some amount of metal**, and a dollar **bill** always represented **an obligation** of the United States government **to pay the holder** of the bill some amount of metal. That all changed on August 15, 1971 when President Nixon issued Executive Order 11615.

This was the big trick. No longer was a dollar bill redeemable in metal. Now you could only redeem a dollar bill for dollar bills. Now you can only exchange your IOU for another IOU!

This won't last forever. Our monetary system is structured so that there are always more debts than money to pay them. Because every dollar is loaned into existence, debts can only be paid as long as the money supply grows. It's a Ponzi scheme, plain and simple. It will only function so long as it keeps growing, and nothing grows forever. At some point the currency will collapse, which is why it's imperative for us to protect our wealth by storing it in something other than dollars.

Unlike fiat currency, the production of precious metals is constrained. Gold and silver will only be dug out of the Earth when it's cheaper than buying some from the above ground supply. Metallic money cannot be devalued in the same way as paper. It's similar in that its price is determined by supply and demand, but it's very different in that the supply is limited. This is what makes gold and silver such an effective store of value. You don't have to worry about losing half your wealth overnight through a proclamation. Nobody can instantly devalue your savings if you hold gold, but if you hold dollars this is a serious threat. It's happened before. In 1933, Franklin Roosevelt reduced the value of the dollar by 41% in one day. And executive orders are the least of our worries. Since 1990, the dollar has lost 44% of its value measured by the CPI. But the CPI is arbitrary and susceptible to manipulation, so let's look at something concrete.

If you look at the Dow Jones Industrial Average measured in dollars, it looks pretty good. The price has gone up significantly over the past 16 years, even with the crash of 2008.

DJIA in USD from Jan 1997 to Aug 2015[135]

But that's not the whole story. Most of that change is due to the dollar depreciating. If we measure the DJIA in hard money, we see a very different picture.

DJIA in Gold grams Jan 1997 to Aug 2015[136]

If you want to retain your purchasing power, it's imperative that you keep your wealth out of the reach of currency manipulators. I believe the best way to do that is by holding physical precious metals.

Who is ‘We’? – *Nov 10, 2012*

Sometimes I hear people say things like “we invaded Iraq” or “we decided to fund this retirement program” or “we agreed to give up some liberties to protect the rest”. I didn't invade Iraq, I didn't decide to fund any retirement programs, and I certainly didn't agree to give up any of my liberties. Why am I being lumped in with these other people?

The perspective we take when looking at a large numbers of individuals has huge implications for the way we think about the world. Seeing a bunch of people as a group is a helpful simplification in many instances, but it's imperative that we remember it's only a thinking tool. Society doesn't really exist outside the minds of individual humans. I think a lot of people make the mistake of seeing society as a person, capable of doing all the things a person can do. But it's not.

The problem is the fuzzy edges: How do you determine which individuals belong to which societies? Who gets to draw those lines? Society certainly can't draw those lines for itself, only individuals can. If you asked everyone on Earth to draw borders around all the societies they perceive, you'd get a lot of overlap, but you'd get a lot of differences too. For instance, if you asked me, I'd just draw one circle around the whole planet.

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[135] http://imgur.com/OHMY4Hl.png

[136] http://imgur.com/Ur4SGb8.png

Many make the mistake of thinking the majority can speak for society, but without objective borders it's impossible to determine who constitutes the majority. Where some people see one society with a clear majority and a clear minority, others might see two distinct societies. Where some see the majority acting on behalf of the whole, others see their society being subjugated by another.

Be very careful when you use the word 'we'. It's the most dangerous word in the world. Some people might not want to be grouped together with you. Speak for yourself.

Preparing to Leave – *Nov 11, 2012*

Before I flew back to Texas, I talked to Carlos to see if he'd be willing to check on my boat every now and then. I had decided to leave the boat at anchor while I went home for the holidays. After checking the prices at the marina, it wasn't really much of a choice. It seemed pretty safe, most of the other boats in the harbor were left unattended for months and I hadn't seen anything happen to them. It was unsettling, though. My boat only had one anchor left and I had already seen it drift a couple times. I wanted to improve Sovereignty's odds of survival by attaching her more securely to the sea floor. But anchors are expensive, and I was poor, so I resorted to a couple heavy concrete blocks with rebar loops that I could tie a rope to. The first one I found at Best Buy. It just barely fit in my backpack and I had to hunch over almost 90 degrees to walk with it on my back, but I got it back to the harbor all by myself riding the bus. The second one I asked for help. Carlos gave me a lift and helped me set it in place the day before I flew back to Texas. I stayed up all night fiddling with the anchor rodes, trying to convince myself Sovereignty would still be here in a few months. By sunrise, I decided there was nothing more I could do, and I started walking for the airport.

Carlos was already planning on giving me a ride, so when I told him I had already walked halfway there he couldn't believe it. He had driven a few miles past me by then and had to loop around, but he scooped me from the side of the highway and drove me the rest of the way to the airport. I left him with a thank you letter and a little money for all his help before catching my flight back to Houston.

Carlos,

I can't begin to express my gratitude for everything you've done for me. You immediately shared your apartment, your food, your friends and your way of life with me and asked nothing in return. You helped keep me safe in this dangerous world that I continually underestimate. You taught me so much, not only about this language and culture, but about human potential. You showed me what a man can do when he's determined, and how quickly changes can take place. You're ability to see the good in people and make others happy is truly inspiring. You're not just causing ripples of joy, you're creating huge waves that are going to circle the planet.

You absolutely made my Puerto Rican experience, and I'm so grateful that the Universe brought us together on that bus stop. I know we're going to be lifelong friends, and I'm looking forward to seeing you again.

Sincerely,
Michael Fielding

Flight Number 572	**Flight Number** 1415
Departs 11/13/12 7:40 am	**Departs** 11/13/12 11:15 am
San Juan, PR	Miami, FL
Arrives 11/13/12 9:20 am	**Arrives** 11/13/12 1:00 pm
Miami, FL	Houston Bush Intercont'l, TX
Seat 16E	**Seat 13B**

It took 4 months to sail from Houston to Puerto Rico, and just over 6 hours to fly back. That was one of the stranger transitions in my life.

Back in Texas, I spent the first few weeks catching up with friends and family, but after a month I was still unsure about my future.

Job Update – *Dec 12, 2012*

Jared Reyes -> Michael Fielding

So how's your blog doing ad revenue and hits wise? Still holding up?

- **Michael Fielding** Eh not really. I haven't really written much since I got back (not for any particular reason, I just haven't felt the urge, and I don't like writing unless I feel like writing). Getting about 50-100 views/day but not much ad revenue. Still haven't got to the $100 minimum to cash out with Google, currently at 80. Trying to find some other type of job around Katy but haven't got one yet. How's pappadeaux?

- **Jared Reyes** Still going mayne, still going. What type of jobs are you looking at?
- **Michael Fielding** Well I put out a bunch of fliers for tutoring but no hits yet. Applied for some computer gigs, like projects for individuals, not companies, but no luck. Applied to manage a firework stand. Applied for some writing jobs from Craigslist, one was to try out different hookah stuff and write articles about it, but no email back. Yesterday I put fliers in mailboxes around my neighborhood saying I could help with xmas lights, pressure washing, pickup truck for hire, computer repair/networking stuff. I'm gonna make some money tomorrow pressure washing a family friend's driveway. I picked up an application for this bowling/family fun place yesterday so I guess I'll try that if nothing else pans out

While I was pressure washing that family friend’s driveway, I met her neighbor Ms. Kinkead. She asked me if I could pressure wash her driveway too, and said she had a lot more chores for me if I was interested in earning some money. I agreed to work for her regularly and we quickly formed a deep bond. Every morning we would sit and drink coffee together before I started my chores for the day. She was enthralled with my sailing stories and I enjoyed hearing about her past as well. She’s a strong, independent, caring woman full of knowledge and anecdotes. We quickly became great friends and I had a wonderful time earning enough money over the next two months to fly back to Puerto Rico and repair Sovereignty.

Power Washing – *Dec 19, 2012*

Michael Fielding: Full-time thinker and adventurer, part-time power washer. Made $250 the last 2 days. Hit me up for a clean driveway.

- **Jared Reyes** Made $250 total in two days or $250 each day?
- **Michael Fielding** total in 2 days
- **Jared Reyes** Either way, nice!
- **Jared Reyes** Still shooting for $10,000?

- **Michael Fielding** Nah I don't think I can get that much by Feb. Maybe 3 or 4k, just enough to fix the boat and buy supplies for a few months
- **Jared Reyes** So you think you're just going to get supplies for a few months, start setting things up and then come back again to get more money and equipment?
- **Michael Fielding** Yeah, now I'm thinking I wanna try just camping with minimal supplies on LI for like a month, look for water and survey it real good, figure out exactly what I want/need. Then sail back to PR, and either figure out how to make more money or find some comrades or donors.
- **Michael Fielding** And that's all assuming my boat's still there come Feb. Otherwise it's a corporate job for me for a year, buy a new boat and then do the above

Flying Back Sunday – *Feb 20, 2013*

Jared Reyes -> Michael Fielding

When are you going to be back on your boat?

Michael Fielding Flight leaves Sunday 2pm, arrives in San Juan about 10pm. Probably get on the boat Monday (but my kayak got stolen, so not sure how I'm getting over there. 1st job is find a new dinghy)

Jared Reyes Maybe that guy who lives in the other sailboat took it.

Michael Fielding lol yeah it probably was Dave the Drunk

Jared Reyes Dave! That’s it!

Home – *Feb 21, 2013*

I don't see Katy, or Texas, or the USA as my home. Earth is my home. (Even that might be kind of narrow-minded. My home is the universe.)

Flight Back to Puerto Rico – *Feb 24, 2013*

Adios Texas, the adventure continues. See y'all again soon.

Flight Number 1300	**Flight Number** 1299
Departs 2/24/13 2:00 pm	**Departs** 2/24/13 7:25 pm
Houston Bush Intercont'l, TX	Miami, FL
Arrives 2/24/13 5:25 pm	**Arrives** 2/24/13 10:50 pm
Miami, FL	San Juan, PR

Chapter 6

Puerto Rico Part 2

My flight back to San Juan arrived at 10:50 pm on February 24, 2013 and my good buddy Carlos picked me up from the airport and let me stay the night at his place. The next day I went to check on my boat and was incredibly relieved to find Sovereignty still floating right where I left her. My orange tandem kayak had been stolen, however, so I needed to find a new dinghy before I could start living aboard. I decided to wait on that, however. I was excited to be back in adventure mode, so I hopped on a random bus to see where it would take me. I ended up walking almost 10 miles back to Carlos' apartment, but I saw a part of Puerto Rico I had never seen before, and it only cost me 75¢.

I spent another night there, Carlos' girlfriend Christina cooked up a delicious dinner, and Carlos drove me to West Marine to buy an inflatable dinghy. I could have bought a used one much cheaper, but I needed one quick, and I paid the price for it. The next day he dropped me off at the boat and helped me pump up my new inflatable dinghy on the dock. I paddled out to Sovereignty for the first time in over three months, and was surprised to find her almost unchanged.

The engine still leaked coolant, just the way I left it. The next day as I was trying to remove a rusty bolt on the seawater impeller I hear someone yell out "Ahoy!". I pop up into the cockpit to meet Jeremy, a 35 year old redhead from Indiana who's been living on a little sailboat named Ruby north of me in the harbor. He's got a Freemason tattoo on his arm, and a scorpion on his back, and immediately begins helping me clean and repair Sovereignty.

We started hanging out pretty regularly. I would buy us beer and food in exchange for his help with the boat. He was a pretty versatile handy man and knew where to find all the parts I needed, with Jeremy's help Sovereignty was running again in no time.

Sovereignty Lives! – *Mar 12, 2013*

Replaced water intake pump. Jeremy used brute force to get the rusted bolt off. Bought new inlet pump, cut new gasket material to fit.

Photo Album[137]

On March 14 I started the engine for the first time in six months. We took her out for a spin around the harbor to celebrate. Next we had to fix the ripped sail, and Jeremy knew just where to take it to get sewn. He was friends with a seamstress in Old San Juan, so we loaded the sail in a bag and took it by bus to her shop. She said she couldn't work on it because the tape residue would gunk up her machine. The rip still had remnants of the duct tape we used in Haiti, but we used some acetone and elbow grease to scrub it off. After that she sewed it up in just a few minutes, and only charged me $30 for the repair. After that we fixed the bilge pump.

I'd like to take a moment to reflect on how stupid I was to leave my boat sitting unattended for three months without a working bilge pump. She easily could have sank, or washed away in a storm. But she didn't, and after we fixed her up, Jeremy and I took a “practice sail” to Fajardo. When we got to Fajardo without any problems, we decided to keep going. We ended up on a five day journey to St. Thomas and back.

Photo Album[138]

Looking Up to See Within – *Apr 1, 2013*

“Know Thyself”– Socrates

It's hard to know thyself when you're an emergent property of a complex system. I'm produced by the interactions of 100 billion cells, with 10 trillion connections. My thoughts are the outputs of these molecular machines. I can't know how my mind works merely by thinking about it, because the thoughts themselves are the phenomenon I'm trying to understand. I can't know myself by looking within.

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[137] http://imgur.com/a/uprrm

[138] http://imgur.com/a/ua8eu

We're sitting in the great chasm between two distinct perspectives: the neuron perspective and the whole-brain perspective. But neither will help us know ourselves.

When we face these difficult problems, it's often useful to set up an analogy and try to understand that instead. We're blessed with a galaxy that looks a lot like our brains. About 100 billion stars, and we can simulate the idea of thousands of connections by looking up at night.

Think of the Earth as a single neuron in the galactic brain. Neurons have a pretty basic job: they receive messages, make computations, and send signals. So let's imagine the Earth doing the same thing.

Like humans, neurons can only detect signals from a relatively short distance. We'll simulate this on Earth by saying that our planet can only receive messages from those stars that are visible to the naked eye. Beautifully, we get about the same number of connections as the average neuron: on the order of ten thousand.

So as neuron Earth spins in space, it's receiving messages from all its closest neighbors. Then, it does some computations. Neurons can do pretty advanced math, and they each perform different operations, but let's keep it simple. Let's say Earth's processor adds up the number of messages it receives from neighboring stars in a day. If it's an even number, it shoots a laser beam at Alpha Centauri. If it's an odd number, it shoots a laser beam at Betelgeuse.

Now imagine all 100 billion stars doing similar kinds of calculations. They detect incoming messages, perform some kind of computation, and then send out a signal of their own. Laser beams shooting every which way, carrying tiny messages that seem insignificant on their own. These are the dopamine, serotonin, and norepinephrine of the stars. And needless to say, the galaxy as a whole can perform some highly complex calculations, even though each planet does only basic arithmetic.

But would this galactic brain be conscious? If we set up the analogy properly, then it's exactly the same as asking “Are we conscious?”. The answer we choose does more to define the word ‘conscious’ than to tell us about the nature of the universe.

I don't really think this is just a useful metaphor either. I think this is literally how galaxies will evolve, to one day be conscious thanks to the transfer of messages between living planets.

Virgin Islands – *Apr 24, 2013*

Jeremy and I set sail for the Virgin Islands on April 5, first stop: Vieques. It’s a fairly large, heavily forested tropical island off Puerto Rico’s southeast corner. We sailed through the first night and arrived off the western tip of the island on April 6. We immediately swam ashore to do some exploring. Once we got on the beach, we discovered signs warning about unexploded ordnance. Turns out the US Navy used Vieques as a target range for decades, scattering hazardous materials in the beautiful jungle, and they’re still not sure if they’ve found all the bombs. We walked up a path to a dirt road and followed that for a while, but the mosquitos were terrible so we returned to the sea for some spearfishing. No luck. Made a canned food dinner and went to sleep.

Set sail the next morning for the open water crossing to St. Croix. Jeremy and I took turns at the helm, listening to music and watching the waves for over 24 hours until we reached the West coast of the island. We anchored near the cruise ship dock and paddled my inflatable dinghy ashore.

Anchorage in Frederiksted, St. Croix [picture][139]

I actually lost a few of my original sailboatdiaries.com posts from this period, so I'm writing this part from memory and pictures, but I took a picture of one post as I was writing it, which is weird but cool:

Post in Progress [picture][140]

Island Office [picture][141]

After a couple days in Frederiksted, we sailed around the Northwest point of St. Croix and over to Christiansted. We anchored and explored, and made repairs. My steering pedestal had developed a large crack around the base, but a local repairmen gave me a great solution: rescrew the bolts with large washers under the head so they would pinch tight over the crack in the base. That worked amazingly well, which is great because a new pedestal would have cost several hundred dollars. Next, we headed north to a small uninhabited nature preserve called Buck Island. We hiked and snorkeled, and I speared a massive lobster which we ate within a few minutes.

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[139] http://i.imgur.com/ZJTX0Y8.jpg

[140] http://i.imgur.com/YyErWhi.jpg

[141] http://i.imgur.com/Zqz6tIa.jpg

Monster Lobster [45 sec video][142]

After leaving Buck Island we sailed around St. John to Tortola, then back to St. Thomas, where I ran out of money and sold my rifle, shotgun and backup anchor. I wanted to keep going down the Lesser Antilles, but without a source of income, I couldn't risk paying entry fees or any more boat repairs, so we headed back to San Juan.

April 24, 2013 · Twitter

Got back into San Juan last night after 4 weeks cruising the Virgin Islands. What an adventure! Beautiful islands filled with cool people.

Corrupting the Youth *– Apr 26, 2013*

It was one of the charges leveled against Socrates 2400 years ago in Athens, and it cost him his life. Today, people still worry about someone giving their child “the wrong idea”. But how can we distinguish the good ideas from the bad? How can we distinguish “corruption” and education?

In the case of Ancient Greece, corruption was obviously defined as undermining the establishment. Both the political and religious authorities relied on faith to maintain their positions of power. Unquestioning acceptance of the official doctrine was the name of the game. And since Socrates was teaching the youth to question everything, he posed a threat to the powers at be, and had to be dealt with.

The situation today is pretty much the same. It might not lead to a death sentence (although in some places it still does), but there's a serious social stigma to openly questioning doctrines of faith. Whether it be unquestioning belief in religion or government, revealing one's doubts to a young person is regarded as a form of corruption. But how can we be sure it's not the religions and the governments doing the corrupting? How do we know whether faith or skepticism is the “wrong idea”?

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[142] https://youtu.be/iWQUqiM303A

I think it's best to imagine how someone's belief system will evolve using each strategy, and the kind of errors that could accumulate. There are two types of errors we can make: believing something that isn't actually true, and disbelieving something that actually is true. These are called Type 1 and Type 2 errors, respectively. False positives and false negatives. So the question is, if we're going to make a mistake, which kind of mistake should we make?

Types of Errors (reprinted from Building a Cognitive Toolbox)

Our brains come with built-in cognitive biases that blur our image of reality. These are known, proven defects in the way the human mind works. All of us will predictably make these mistakes, unless we know enough about them to counter their effects. It turns out that many of our cognitive biases encourage us to form beliefs before we really should.

We're pattern seekers. That's what we do. Our brains are always looking for the signal in the noise, and our amplifiers are turned all the way up. Our environment selectively bred us for pattern-matching overdrive by killing off our less-observant (or more-skeptical), would-be ancestors. Believing things that are false wasn't as dangerous to our ancestors as not-believing things that are true. Making more type I errors (false positive) than type II errors (false negative) turns out to be a useful trait for survival. The standard example is an early human that hears a rustling in the bush. It's extremely beneficial to assume it's a tiger if it really is a tiger, and the penalty if it's just the wind is low (which would be a type I error, believing something that's actually false). If, however, the person doesn't notice the pattern, or isn't convinced it's a tiger, and it is in fact a tiger (which would be a type II error, disbelieving something that's actually true), then that DNA isn't passed on.

This ingrained cognitive bias wreaks havoc on our modern minds. Now that we're trying to understand the world instead of just pass on our genes, we have to work to overcome our instinctual irrationality. Not only do we tend to believe things before we should, our brains actively conform our perceptions to what we already believe.

Spinning Dancer Optical Illusion [image][143]

This dancer can be seen spinning either clockwise or counter-clockwise, but once you see her going one way, it's nearly impossible to see the other perspective. But unfortunately, this cognitive bias isn't limited to our visual perceptions.

This is why it's much more dangerous for modern humans to believe something that isn't true (type I error, false positive) than to not-believe something that is true (type II error, false negative). With the former, your cognitive biases start working to conform your perception of reality to the false belief. Not only do we make more type I errors than we should, but they can become cascading errors that form the basis for more mistaken beliefs, and they all appear to be true.

Not-believing something that turns out true is much easier to fix, because once we find compelling evidence that it is in fact true we will be quick to adopt that doctrine.

Our brains are constantly on pattern-seeking overdrive, and always working to conform our perceptions to what we already believe; we have to compensate by being skeptical.

Dave's Dismasting – *May 4, 2013*

One day, my neighbor Captain Dave called out from his boat, “Hey Mikey, can you come take a look at this?” Jeremy and I paddled over Dave's boat, Imagine This, to see what he was talking about. We climbed aboard and Dave pulled out a screwdriver, dug it deep into his rotten wooden mast and asked if we thought it was safe.

It wasn't. It was incredibly dangerous actually. I couldn't believe the mast hadn't fallen over in a storm already. It was literally hanging by a thread; the stainless steel shrouds were the only thing keeping the mast upright. So we got to work taking it down.

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[143] https://en.wikipedia.org/wiki/Spinning_Dancer

Dave's Dismasting [30 sec video][144]

Next came what Dave referred to as “a war of attrition”. The mast stayed partially connected to *Imagine This* for months, slowly rotting alongside his boat in the San Juan harbor. Every now and then, usually when he was drunk, Dave would hit the mast with a paddle and some small pieces would break off. It was a very slowly process, however, and when I sailed away in October it was still mostly there.

Mike and Jer, Rescue Rangers – *May 11, 2013*

Crazy storm last night, torrential rain and probably 40 mph winds. Jeremy and I were chilling on Sovereignty when we noticed another boat had gone adrift. Its mooring had come loose, and it was banging up against the wall, so we took off after it.

I got a rope ready and drove up along side, then I gave Jeremy the wheel and hopped aboard. I cleated off the rope to the bow of the drifting vessel, and Jeremy throttled up to pull us away from the wall. Did I mention Sovereignty was on empty?

Anyway, he pulled the boat a little bit away, but was having trouble making this turn behind another boat with me in tow. So he drove close and we switched places. Now I’m at the helm, I tried to reverse and spin us to make the turn, but ran over the line we were using to drag the other boat.

So my engine froze up. I ran to the bow and tossed my anchor, saving Sovereignty from hitting the wall by just a few feet. Then I dove in to untangle the line. It took a few minutes. I didn’t bother putting on a mask, tore up my hands on the barnacles growing on my prop, but eventually I got the tangled rope free. This is in heavy rain and lightning by the way.

So I climbed back aboard and started the engine, motored forward and hauled up the anchor, then spun to port to throw the rope back to Jeremy, who had been fending the other boat off the wall while I was in the water. We finally got it tied properly and start dragging the boat and mooring over to this steel barge I use as a dock sometimes. Of course, as we motor over there the wind and rain die down, so tying her off to the barge was relatively easy. I had to line it up far away since I had this boat in tow. I drove past the barge and released the tow line, then went back to my mooring while Jeremy tied her up. We gave the guy a call (Jeremy had his number), and he drove over to see if everything was alright and thanked us for the help.

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[144] https://youtu.be/nrB5zfS7CK8

Today we helped the owner reset his mooring ball, which was actually pretty tough. Took a few tries to get his anchors to dig into the deep, rocky bottom of San Antonio Channel. But eventually we got it, and he rewarded us with beer and a little money. Not bad for a night’s work!

Contradictions – *May 11, 2012*

“Contradictions don't exist in reality. Not in part, not in whole.”

– Albert Einstein

A contradiction is a combination of statements or ideas that are opposed to one another. When Einstein said they don't exist in reality, he wasn't describing some law of physics, but a way of seeing the universe with humility.

I have to constantly remind myself that the real universe is not the same thing as the version of the universe I experience in my head. It's way, way, way, way more complex. We only perceive a tiny sliver of what there is, and we understand a tiny sliver of that. My picture of the universe is a crude kindergarten finger-painting of the real thing. So it shouldn't be surprising that it contains contradictions from time to time.

But how do I know the contradiction isn't out there in the real world? What if the universe does contradict itself? Then I would need a contradiction in my head if I want to understand reality. How can I know whether the contradiction is in here or out there?

I can't. There's no way to prove a contradiction actually exists in reality, by definition. Anything that's proved to contain a contradiction is called a falsehood, that's simply what the word means.

So if we notice a contradiction, there's absolutely no way to know whether it's a mistake in our understanding, or an accurate understanding of a bizarre universe. So we have to make a philosophical decision, not based on evidence, but based on reasoning about the consequences of the decision.

If we're right, we're right, so we really just need to think about what could happen if we're wrong.

It's very dangerous to assume the universe can contain contradictions. If we're wrong, then we'll have contradictions in our model of the universe and leave them there. We could make all sorts of bad decisions based on our false beliefs.

If we assume the universe doesn't contain contradictions, we can forge this assertion into a powerful tool. Now contradictions become red flags, drawing our attention to bad ideas.

The Emergence of Complexity – *May 19, 2013*

The Emergence of Compexity [2 min video][145]

Island Plan – *May 21, 2013*

It was about this time that I began to seriously plan a return trip to Little Inagua, and I wrote the following:

The first step is to better investigate Little Inagua. The priority is to establish a safe and reliable freshwater drinking source. Once we have that, the rest is easy. So once the boat's secure and we've established a camp, we'll search for surface water. I believe there are inland ponds from aerial photos that I'd like to investigate, but I need to get back there. There are game trails that I'd like to follow because I think there's a good chance they'll lead to water. But if we don't find surface water, we could try digging a well. Islands tend to have a freshwater lens effect where the freshwater floats above the saltwater underground. If that doesn't work, we may have to rely on rainwater collectors, solar stills and desalination, or find another island.

My boat has a 90 gallon freshwater tank and I carry plenty extra so finding water isn't really an issue for our safety on this expedition, it's just the first step towards establishing a colony. Once we figure out the water situation, I think the first step will be to build a working bath house, using solar and wind power to provide hot showers and toilets and freshwater spigots and outlets. Once you have a bath house and plentiful freshwater, anyone with a tent could come join the movement.

I think that would be a good first step, doable in about 2 months with about $5,000. We'll film the whole thing and use the video to attract more help, and to (slowly) invite people to visit the island. I'm not sure if I want this video going viral and getting government attention too early. I don't think I'll be breaking any laws, but I'm of the “ask for forgiveness, not permission” line of thought.

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[145] https://youtu.be/yJX19izWeJg

Or if the experiment is a horrible failure, we'll learn from our mistakes and try something else.

The Scorpion and the Frog – *June 1, 2013*

“A scorpion and a frog meet on the bank of a stream and the scorpion asks the frog to carry him across on its back. The frog asks, "How do I know you won't sting me?" The scorpion says, "Because if I sting you, we'll both drown."

The frog is satisfied, and they set out across the river, but in midstream, the scorpion stings the frog. The frog feels the onset of paralysis and starts to sink. Knowing they both will drown, he has just enough time to gasp "Why?"

The scorpion replies, "Because I'm a scorpion."

From the moment I met Jeremy, I knew I needed to be careful. I got the feeling that he was capable of breaking conventional morals, but that he was also capable of being a good friend. I imagined if we always had some trip together on the horizon, he would never have a reason to betray me. It worked for a few months; he was a great friend and taught me how to interact on the streets of San Juan, helped me fix my boat and kept me safe throughout our Virgin Island adventure. But when we got back, the future wasn't exactly clear. I was talking about sailing back to Little Inagua and on to the United States where Jeremy was a fugitive, and he was flat broke trying to find work in Puerto Rico. I left him in the harbor one week while I hung out with Carlos, and when I returned to my boat two ounces of gold were missing.

At the time, two ounces of gold was worth about $3,000. It was the last of my stash, and without it I was penniless.

I didn't tell anyone or report it to the police. I didn't see what good that would do. I was pretty embarrassed for making such a huge mistake. For years I had been proclaiming the dangers of banks and suggesting people buy precious metals to protect themselves from the Federal Reserve System, but I lost much more by holding gold than keeping my money in a fiat denominated checking account.

I saw Jeremy again a few days later, and I laid the guilt trip on him hard. I figured the only possible way for me to get the gold back was to convince him to give it back voluntarily. I didn't want to threaten him or use violence, and I certainly didn't want escalate the situation and die over a couple coins.

He denied stealing my gold, blamed his baby-momma, said he brought her onto my boat one night while I was gone and she must have found it. He almost cried. He said he would pay me back. He gave me $50 a few days later and said he would work off the rest of the debt in time.

Jeremy was working on fixing up an outboard motor for another guy in the harbor, but one day while he was working on it next to my boat, a police SUV pulled up next to the harbor wall and yelled for Jeremy to come talk to them. He ripped the pull-start on the half-fixed outboard and took off on the dinghy in the opposite direction. The cops jumped back in the SUV and took off after him. That was the last time I ever saw Jeremy.

I started hanging out with Captain Dave more often in the following weeks. Since I didn't have a dinghy at this point, Dave was my only way to get to shore without swimming, so I would make him coffee in the morning before yelling out “Hey Cap-i-tan, can I get a ride?” We got to be really good friends, despite his drug abuse issues. Dave was a retired banker from Indiana who fell in love with Puerto Rican crack, so he decided to spend his retirement on a derelict 40' sailboat in San Juan harbor within walking distance to his favorite drug spot. He was quite the character, full of jokes, wisdom and sorrow. He gave me advice on office culture: “Always show up early to meetings and help the speaker set up; always ask a question at the end. Don't be afraid of people, they won't bite you, and if they laugh at what you say, that's a good thing.”

Dave also taught me what NOT to do. He had three kids back in the States, the youngest was about my age, and he missed two of their weddings that summer. I saw him cry about it on several occasions. It was heartbreaking to hear that he wasn't even invited to the ceremonies.

Besides hanging with Dave, I had some good friends come visit me in Puerto Rico: first Byrd and Alex, then Jared and Linda, then Jacob, my mom, Sean and Marc. We went on all kinds of fun adventures to the bioluminscent bay in Fajardo, the caves in Arecibo and Camuy, the rainforest called El Yunque, the Bacardi factory in Cataño and explored all around San Juan.

Got a Job! – *June 22, 2013*

Got a Job [1 min video][146]

Carlos helped me find a job at Hosteria del Mar, and asked me to stay in his oceanfront apartment for two months while he worked in New Mexico. He needed someone to take care of his dog, Imani, a beautiful older pit bull who's incredibly obedient and fiercely loyal. With no bills and few expenses, I was able to save about $100/week with my part-time minimum wage job at the hostel. My official title: “Beach Boy”, and my responsibilities included renting chairs and umbrellas to guests on the playa. With this income, I started to buy and assemble the tools we needed for our “boot-strap system”, with our main focus being the production of freshwater on the island.

Water from Air [1 min video][147]

Weatherproofing [1 min video][148]

Testing the System [2 min video][149]

System complete! [3 min video][150]

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[146] https://youtu.be/Gm-ptD7nNFY

[147] https://youtu.be/v5bDSS_a_Kk

[148] https://youtu.be/64hqZldoJ1w

[149] https://youtu.be/VhoHEpn2Du8

[150] https://youtu.be/bjkYq2SLl-I

Self-Sufficiency [2 min video][151]

I started a GoFundMe page for the sail back to Little Inagua. It's funny; before Jeremy stole my gold, I didn't have the courage to sell those coins and use the cash to fund my trip. But once I was penniless, I had nothing to lose, so I decided to try running a crowd-funding campaign to pay for the journey. Like Tyler Durden said in Fight Club, “It’s only after we’ve lost everything that we’re free to do anything.”

I pitched it as the “Founding of the Free Academy”, and announced we would film a documentary about the creation of a new kind of learning institution, with the goal of spreading liberty by sharing knowledge of self-sufficiency.

Employing the Golden Circle *– Aug 1, 2013*

Simon Sinek: How Great Leaders Inspire Action [18 min TED Talk][152]

Why: To spread Liberty

How: By sharing Knowledge

What: Of Self-sufficiency

What if we had a true vote? What if we could say ‘no’ to power? How might the world change if it was easier to walk away from tyranny? I'm trying to figure out how to build a good community from the ground up, using minimal resources so the process can be copied by anyone, anywhere in the world. The idea might sound a little fuzzy, so let me try to explain it through some analogies:

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[151] https://youtu.be/lu2RIC8Z_y0

[152] https://youtu.be/qp0HIF3SfI4

Free as in Freedom: Richard Stallman & the Free Software Revolution [pdf][153]

I see strong parallels between building a small but scalable society and the GNU project. We're writing the bootstrapping software for a new social operating system, with an informal GNU General Public License. We're trying to figure out a really simple and inexpensive series of steps a small group of people could take to plant the seeds of a self-sufficient community. Our design will be open and free: copy it, modify it and distribute it. We'll share what we discover; we hope others do the same.

I see another analogy in Von Neumann probes:

Von Neumann Probes and Dyson spheres [48 min video][154]

The goal here is to design a small, cheap, and simple "device" that we can send to unused portions of the Earth. Our first attempt at such a device will be constructed from: a sailboat, humans, water, food, seeds, solar panels, batteries, water pumps, hose, etc. Unlike interstellar Von Neumann probes, we'll have the advantage of a supply chain back to the mother community. It'll be like an embryo with an umbilical cord, but eventually we hope the device matures into a self-sufficient, independent community.

In my dream Free Colonies start popping up across the planet, slowly at first but on an exponential curve, weaving a new global network based on the principles of Liberty.

But even if this ends up being just a crazy month vacation, it'll make for a great adventure and a great story.

Last Weekend at Hosteria del Mar – *Sep 28, 2013*

My last weekend at the Hostel turned out to be one of the best. I was asked to work as a server for a wedding reception Saturday night, after I finished my regular Beach Boy duties. Unfortunately I didn't have any dress clothes and very little money, so I went to a thrift store and explained my predicament in broken Spanish to the owner. Thankfully, she let me take some dress slacks and a black dress shirt on the house.

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[153] https://static.fsf.org/nosvn/faif-2.0.pdf

[154] https://youtu.be/zQTfuI-9jIo

Saturday afternoon, I helped arrange chairs on the beach for the wedding before I rushed to shower and change for the reception. I watched the ceremony from the 3rd floor balcony as we prepared for the banquet. It was a beautiful wedding. Jose and Taylar are a really fun couple, and I got to be really good friends with the wedding party. Jose's beautiful friend Elisa asked me to have a drink with her, and after dinner we all went to hang out on the beach, where Jose scooped up his new bride and carried her into the ocean, wedding dress and all.

The Crew's All Here *– Oct 3, 2013*

The Crew's Thoughts [3 min video][155]

Benjamin and Marc arrived on October 3, joining Sean and myself at Carlos' apartment. Marc had come out for a visit earlier in the summer, but flew back to Texas to return to work. We encouraged him to return for the sail, but none of us were sure what he would decide, Marc included. In his own words, “The intentions for coming back to Puerto Rico on such short notice is for the adventure, fear of the unknown, we have no idea what's going to happen and that's the exciting part about it. Setting sail in the next couple days and going to this island to create something out of nothing. Just creating a place to live, a place to lay your head and to maintain, in sort of a survival type atmosphere. It's getting out of the comfort zone and pushing yourself, and I feel like if this goes on, goes through, then you can do anything in life.”

Before our departure, we received a package in the mail from one of my old crewmates containing OG Kush Indica, Dutch Treat Sativa, and a small plastic jar of waxy golden cannabis extract. A pleasant change of pace from the weed in Puerta de Tierra, it certainly made our days at sea more enjoyable.

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[155] https://youtu.be/1yT34f4x4GE

Delayed Departure – *Oct 5, 2013*

The plan was to set sail for the island on October 5th, but we decided to postpone our departure based on the weather forecasts. One low pressure area in particular named “Invest 91L” looked like it might form into a tropical storm and move in our direction.

October 8, 2013 · Twitter

Another ambiguous forecast... 30% chance it becomes cyclone in 2 days, 40% in 5 days. Moving WNW... #WaitingGame

San Juan Update – *Oct 11, 2013*

Well we're stuck in Puerto Rico through at least Sunday, waiting on the weather, but it's given me the opportunity to reflect, and for that I'm grateful.

I don't think I've done a very good job of explaining this project. It's hard because I'm doing it for so many reasons, personal and philosophical, and they mix together in a tangled web. But I'm seeing a thread now, so let me see if I can unravel it.

Why am I sailing to an uninhabited island to build a little habitat, just to leave a few weeks later? And why am I calling it "The Free Academy"?

This is freedom propaganda.

I'm trying to show people a perspective. It might be foreign to some, familiar to others, but probably a faded childhood memory for most. It's a way of seeing the world without judgement. Open to everything and sold on nothing. An honest search for truth.

This perspective isn't an answer to anything. Perspectives never are. But my journey has given me the opportunity to peer from a new vantage point, and I'd love to share a glimpse of my vision with you.

I'm trying to help people to think outside the box, but to do that, first I have to get your attention. Sailing to a desert island seemed like a fun way to do that.

But the island works on several levels. Uninhabited islands are intuition pumps. They're aids to the imagination, tools to help us think. It's been in the philosopher's pocket for centuries: the old desert island scenario. People love to speculate about what would happen in a "state of nature", tabula rasa, and often cite speculation as evidence for various claims. But no one ever runs the experiment! Well, I want to experience it first hand, if only for a short while with a few people.

Is this really a "state of nature" though? We're taking all the modern tools and technology we can afford, and enough food and water to last the trip. Not exactly an extreme survival situation (hopefully!)

But that forces us to examine the whole idea of a "state of nature", that elusive foundation for our social contract. If this freshly inhabited island isn't a blank slate, do blank slates really exist? Because what we're doing is exactly how every society, large and small, in the history of humanity has ever been formed: a few people went to a new place (often already claimed by another group), carrying all the tools and supplies they could manage, and simply continued living their lives.

So should we form a government? Should we claim property rights? Should we vote on these issues? How will we resolve disputes? How will we build infrastructure? What do we need to survive and thrive?

These are the sorts of questions I hope to investigate, and hopefully some of you will think about them too. But why give it a name? Why does sailing to an island and building a hut deserve a name like "The Free Academy"?

The name is another intuition pump. I made it up to help us think about learning. To force us to examine the question: what exactly is a learning institution? Could four guys on a desert island be a college campus?

Well, we'll be thinking a lot, teaching and learning from one another. What else does it take?

It's important to understand: the hut is not the Academy. The Academy lives in our minds. Like all learning institutions, it's made of people, not buildings. Buildings are just tools we use to make our lives more comfortable. So we'll establish the Free Academy on an uninhabited island and film the entire endeavor, but it sails with us when we leave. Remember, the Academy lives in our minds. I look forward to sharing our adventure with all of you, and building new Free Academy campuses as I continue my journey.

If you're excited about the project, please help us by sharing this post, and consider making a small donation to our GoFundMe campaign. We're offering a funny t-shirt for donations of $50 or more:

Funny T-Shirt [picture][156]

Carlos' Return *– Oct 12, 2013*

Luckily, the extra week in Puerto Rico meant we got to welcome Carlos home and thank him for letting us stay in his apartment while he was gone. I was really happy that Sean, Marc and Ben got the chance to meet him after hearing all my stories about our time in Puerto Rico. We spent a couple days hanging at his crib, watching the weather and making our final preparations. The night of October 15, we finally felt like everything was ready and the weather looked good. Carlos drove us to the harbor, helped us load up the boat and saw us off on our voyage into the unknown.

October 15, 2013 Satellite Weather Image [gif][157]

October 15, 2013 · Twitter

Forecast looks good, boat looks good, crew's ready... I think we're setting sail in the morning! We'll let y'all know for sure tonight!

October 15, 2013 · Twitter

Hey anyone want to meet me in Key West on November 20 and help me and Ben sail across the Gulf of Mexico? 8-14 day voyage... hit me up!

For Sovereignty

may this vessel find good winds and calm waters
may it sail with the grace of a right sturdy man at liberty with himself
may it nurture the minds, the snaps and pops and firings of the sovereign few
building something entirely new,
hand over good noble hand,
not fists to thirsty throats.

~Traci Lavois Thiebaud

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[156] http://imgur.com/vd3u7rI

[157] http://i.imgur.com/MHlOIy3.gifv

Chapter 7

Founding the Free Academy

San Juan to Puerto Plata – *Oct 16, 2013*

We left about 4 am, followed by a wake of blue-green bioluminescence that I had never seen in San Juan harbor before. We motored past the lighthouse and entered the ocean right as the sun rose, a gorgeous pink and orange glow emerging behind El Moro castle.

Gorgeous first sunrise [picture][158]

Between the ripped sail and light winds, we made very slow progress. We expected to be on Little Inagua within a few days, but it ended up taking 8 days just to reach the Dominican Republic.

It's difficult to share the experience of life at sea in words. Time changes out there. Hours felt like days. We looked forward to each sunset with eager anticipation, then we looked forward to the next sunrise. We became more in tune with the moon, learning through observation that it rises 50 minutes later each day. We saw the stars, the clouds, the sea, and the Earth with new eyes. We became more aware of our place in the cosmos. Benjamin later reflected, “That was a huge part of the trip for me: feeling small and insignificant compared to the vast uncaring ocean during the day, giving way at night time to a tremendous feeling of interconnectedness.”

We tried to make our time comfortable and enjoyable. Lots of meditating and sleeping, staring and mindless steering. I told Ben, “Moving a 16,000 pound boat over a thousand miles sounds hard, but the wind does most of the work. We just adjust the sails and rudder until she moves the way we want her to.”

We tied up a blanket for shade each day, and eventually pitched a tarp over boom when the wind died completely. After a few days at sea, the guys were getting restless. The sailboat was its own kind of prison. A 35' x 12' cell at its widest, even without guards we were trapped.

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[158] http://i.imgur.com/HcxYu60.jpg

Staying Cool [15 sec video][159]

October 18, 2013 · Twitter

Kinda crazy how far we get cell data but I guess it makes sense since I still see the antennae. Bars dropping fast, see ya on the other side

October 18, 2013 · Twitter

Flat and calm out here so we're cheating with the engine... wish us some wind, the noise kills the ambience.

A few spectacular episodes broke up the monotony. As we passed Desecheo Island, I heard something that sounded like a whale. Distinct blowhole noises, but we never spotted the source. That night, Benjamin said he heard a woman shouting, but there was nothing near us for miles and miles and miles. Staring into the pitch black water, we could see the scintillations of dinoflagellates in the wake of the boat, little white flashes that were quite different from the blue glow that followed Sovereignty as we left Puerto Rico.

During the extreme calm, we had several opportunities to get out and swim. I rigged a rope swing with my jib halyard and we took turns jumping off the boat. We killed some time scraping the barnacles off the dinghy, watching the debris sink into the endless expanse below instilled a terrifying and beautiful feeling.

Unfathomable Depths [1 min video][160]

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[159] https://youtu.be/AtdinSt1GIE

[160] https://youtu.be/AVbP2W6fOTk

We spent hours watching clouds on the horizon, storms merging and splitting, lightning in the distance. We avoided them all until October 21.

October 22, 2013 · Twitter

1st storm last night but we held together. Heading to Puerto Plata for diesel.

The next day, a couple green Magnolia Warblers landed on Sovereignty for a rest. They were so tired, they let us pick them up and hold them. The impact on morale was phenomenal. We spent an hour playing with the tiny birds, feeding them crackers and offering them water from a bottle cap before they flew out of our lives.

Stowaway Warblers [2 min video][161]

Then Ben caught a small fish, which he proceeded to clean and cook within a few minutes, and despite its size we all got a taste of the fresh kill.

October 22, 2013 · Twitter

Played with friendly finches and just ate a small pompano dolphinfish. Almost to Puerto Plata! (PS write us often!)

A little while later, we saw a line of clouds approaching from the East and knew the weather would soon take a turn for the worse. Between us and the storm, we saw a beautiful ketch catching up with us, a big 50' sailboat with two masts and three sails. At first, I was jealous of their ship. I imagined the crew must be very experienced sailors, to man a boat like that. As the line of clouds approached us, we took down our sails and began battening the hatches at least 30 minutes early, but the ketch kept flying their sails even as the storm hit them. I imagined they knew how much their boat could handle, and were preparing to ride the heavy winds of the storm.

As the line of clouds overtook them, I started to question my assumptions. We could see their sails flapping like crazy, and it looked like they were struggling to hold their course. As the clouds passed us, we lost sight of the vessel and began to worry more about our own situation.

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[161] https://youtu.be/mwrCQDNh388

Shaky Storm Footage [30 sec video][162]

The biggest problem for us was the dinghy. It kept getting tugged away from Sovereignty by the waves, then accelerating back towards us from the tension on the rope. We tried lengthening its leash, then shortening it, but we couldn't get the tiny boat to follow us at a safe distance.

Then the tow line snapped, and she started floating away. I tried to start the engine to follow her, but the starter was still having issues. I had to hot wire the glow plug by using a screwdriver to conduct current across the connections, which pre-heated the diesel but also quickly drained the batteries. Starting the engine was a balancing act between getting the glow plug hot and maintaining enough battery power to turn over the starter, but after a struggle I got it to start and we were able to follow our sinking dinghy throughout the storm. After the sun set, before we lost sight of the boat completely, I donned a life jacket and swam a fishing line out to the little boat in the midst of crashing waves. I attached the line to the dinghy's bench seat, and Ben attempted to reel it in slowly, but she was taking on water. When she was abreast of Sovereignty I jumped in again to tie a nylon rope to her last remaining cleat, but she soon turned belly up and then the final cleat popped loose. I doubt the little boat sank, since the bilge was filled with Styrofoam, but we lost her in the darkness and gave her up to the ocean.

Benjamin awoke in the middle of the night and checked my bilge to find it full of water once again. The electric bilge pump wasn't working (again), so we emptied it by hand using the manual pump. I discovered the water was coming in through a crack around the exhaust pipe; the dinghy must have banged it during the storm.

The wind and waves subsided as the night grew darker, and by 11 pm we were bobbing quietly a few miles offshore of the Dominican Republic. A low-flying plane passed over us in what we believed was the direction of the ketch that had accompanied us all afternoon and through the storm. Shortly thereafter we saw a bright red orange streak of light shoot up from the horizon. We weren't sure what it was at first. Fireworks? A flare? We turned on the radio and listened for a distress call, but heard nothing. Could it be from the ketch? It was a nice ship, could they really be in trouble?

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[162] https://youtu.be/Obi2GUu5DpM

We laid down to sleep until sunrise, but I was startled awake when Ben said "Michael. There is a fucking ship directly in front of us."

I went for the radio, and in my half-asleep, half-awake state I broadcast, “How's it goin?”. The ship pulls alongside us. It's probably 60' long; a 3 story tall steel coast guard vessel. A crewman on the deck shouts, *“du chiss?”*

I yell, “What?!”

“Duchess? Dutchess?”

“No, this is Sovereignty.”

“What's wrong with you?”

“Nothing! We're just waiting for morning.”

"O.K. Have a good night."

And with that, the giant ship motored off under the waning moon and Orion, in the direction of the red streak in the sky. We hypothesized they were searching for the ketch, and that streak must have been a flare. Our imaginations ran wild trying to imagine how the ship might have got in trouble, but we never found out for sure what happened.

The storm did wonders for our confidence. After surviving ten foot seas, and retrieving some floats that blew off in the wind, we felt comfortable knowing we would be able to rescue each other in the event of a man-overboard situation. We gained a strong sense camaraderie, operating as a unit for the safety of the ship, effectively communicating and cooperating in the midst of nature's fury. Our lives were in each others' hands, and we grew to trust each other completely.

Puerto Plata – *Oct 23, 2013*

The next day, we motored in to Puerto Plata, but without detailed maps I wasn't sure where to go or where to find a refueling station. We sailed along the coast, using binoculars to look for sailboat masts, the tell-tale sign of a marina. We finally spotted one near the West end of the city, and motored in to see what we might find. We were hoping to enter the city without being extorted, but the Dominican Customs came out to meet us immediately when we docked at Ocean World Marina.

They only demanded $100 or so as an entry fee. I followed the dockmaster into the office to fill out paperwork while the crew stayed with the boat. The marina employees asked if we needed diesel, and proceeded to fill up the boat while I was in the office. When I came back, I saw they had pumped 66 gallons into Sovereignty. The problem is, Sovereignty's fuel tank only holds 35 gallons. They didn't realize that Sovereignty's fuel line was broken, and I had to physically hold it in place while pumping in order for the fuel to flow into the tank. They had pumped 66 gallons of diesel into Sovereignty's interior, and where it pooled at the bottom of the bilge. We used a manual bilge pump and a jerry can to collect it and return it to the tank. Luckily the marina took back the extra fuel, only making us pay for the diesel that actually ended up in the fuel tank.

Ocean World Marina is quite beautiful. We explored the grounds for a while, conversing with locals in broken Spanish. We made friends with one young Navy worker, who was amazed that I owned my boat outright. He said he only makes $100/month and it would take him 25 years to save up enough money for a sailboat like mine. Then we caught a taxi ride into town with “La Paz”. He was a pretty cool guy, kept a revolver next to his seat which made me feel safe. We had a great time on the town, bought some local beer called Presidente, chatted with some older English speakers, bought some brown local weed. Marc paid a dollar for a moped ride, and that night we all slept on the dock, grateful for the opportunity to rest our heads on solid ground.

The next day we started searching for a replacement dinghy. We asked one of the marina employees and he showed us a fiberglass dinghy like the one we lost, but it looked like it would sink in a heartbeat. We asked about a kayak, and he said he would give one of his friends a call.

In the meantime, I found someone who could sew up Sovereignty's ripped mainsail. We left him with the sail and he said he'd have it done within 24 hours. Then we set out to explore. We hopped a barbed-wire fence and started walking up a nearby hill towards an abandoned house. The concrete structure had a partially collapsed roof, but we climbed up on top for an incredible view of the ocean and the city.

We continued on up the hill, past wandering cows and bulls, through thick brush and up the steep slope. Marc and Sean turned back half way, but Ben and I made it to the top for a stunning panorama. We walked back to the harbor as the sun set, carrying large rocks as we passed more bulls in case they decided to charge.

The next day we caught another taxi into the city for groceries, and saw locals whizzing in and out of traffic on mopeds like they had no concept of mortality. We bought some fresh food for the next leg of our journey, then rode back to the marina where our friend had found us a kayak for sale. I took a short ride over to the beach in his golf cart where his friend was selling a yellow tandem ocean kayak with a slow leak. We decided to take it despite the leak, considering our desperation for a dinghy and limited time frame to buy one. By the time we got back, the sail was fixed as well, and we just needed to caulk the crack around the exhaust pipe before we were ready to head out for Little Inagua.

San Juan a Puerto Plata [1 min video][163]

Puerto Plata to Little Inagua – *Oct 26, 2013*

We departed from Puerto Plate early on the morning of Day 11. We were already a week behind schedule, but caught great wind crossing the Windward Passage.

October 26, 2013 · Twitter

Left DR, flying towards LI, AVG 4.5 KTS today. Thinkin fusion is only energy SRC in cosmos, all else is derived. Send W. series scores.

October 26, 2013 · Twitter

It takes a lot of thinking & conversing w/ open minded people to undo all the damage inflicted by formal education.

We approached West Caicos the evening of Day 12. Unfortunately we hit another intense storm, so we dropped sails to bob through the night. Time stood still. We huddled in the cabin to wait it out. Sleep was difficult. The night dragged on as we were beat from all sides.

By morning, we decided to forgo landing on West Caicos and headed 30 miles west to Little Inagua. We continued to struggle with electronics. The batteries were basically shot, so yet again I was unable to start the engine or charge the laptop which contained our navigation software.

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[163] https://youtu.be/Stwf-mBQn8Q

October 26, 2013 · Twitter

Big storm last night near W.Caicos. Rode it out no prob but batteries died. Waitin on sun to charge. Seans BDay today, send sat. phone love

Little Inagua – *Oct 28, 2013*

We anchored off the northern tip of Little Inagua just as the sun was setting. I dove in to check the anchor's holding, terrified I would run into another shark like the last time I was there. Swimming there at dusk played tricks on my mind, but the anchor looked good and I didn't get bit; I slept great that night.

We sailed out from anchor the next morning without starting the engine, since the batteries were dead, and headed south to see what the other side of the island looked like. We finally got some clear blue sky, and the solar panels charged up my batteries in no time. Dolphins played in our bow wave as we sailed around the corner, always a pleasure to watch, and we could easily spot coral heads through the crystal clear water. As we approached our second anchorage, we dropped the swim ladder and dragged Marc behind the boat with a snorkel to point us towards a sandy anchorage.

Marc Superman [1 min video][164]

The feeling of being back on Little Inagua was incredible. Bliss. Euphoria. This island is too beautiful. We immediately launched the kayak to go exploring. Within 30 minutes we found a half dozen beautiful bleached conch shells. We began moving things ashore, popped the tent, and started spear fishing.

I speared the first fish in no time, which we ate within minutes, and used the remnants as bait, which helped us catch a barracuda, which we also ate within minutes. The meat looked a little under-cooked, but my understanding was that you could eat raw fish, so I didn't worry too much about it. Ben tied the barracuda head to a rope and hung it over the side of the boat to chum the water, which worked astoundingly well. Sharks began circling Sovereignty, and I got some awesome footage of the silent hunters soaring through the sea.

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[164] https://youtu.be/UP4r7j8ujIg

Swimming with Sharks [45 sec video][165]

Marc and I paddled to shore to start a fire while Benjamin and Sean continued fishing. Before we could get it lit, we heard shouts from Sovereignty. We rushed back to the boat in time to see them wrestle a five foot shark onto the deck. I couldn't believe it.

Pulling up a Shark [7 sec video][166]

Turns out, the shark bit into the barracuda head and got its teeth caught in the rope fibers. No hook or anything. Benjamin reacted fast and dug the gaff into its gills, but almost went overboard with the heavy creature thrashing about. Sean saved him from going in and helped pull up the shark, but we had no idea what to do with such a big fish. We debated how to kill it, how to cut it up and how to cook it, but in the end it didn't matter because we all got food poisoning from the barracuda.

We kayaked the huge fish to shore in the leaking kayak above shark infested water and started grilling it over a fire, but I only ate a few bites before my stomach started feeling funny. Benjamin got hit the hardest, and Marc was miserable too. It was scary. We were at least a day sail away from civilization, and the crew was nauseous, diarrhetic, severely dehydrated, and worst of all, losing morale.

Sean and I did everything we could to boost their spirits. We got them blankets, gum, Pringles, anything we could think of to distract them from the discomfort. I knew it was bad when Ben said, “I wish Ginger was here”. Ginger is his family's dog back in Katy.

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[165] https://youtu.be/mP9KYeeaCPI

[166] https://youtu.be/TyLLxqcnmtY

We all made it through the night, and spent the next day recuperating and rehydrating. Eventually we worked up the energy to move camp to a shady spot under a rock wall to the south, which became our hub for the rest of the stay. We hung hammocks and mosquito nets, laid mats and constructed a shade tarp on the cliff. Marc and I hiked inland to explore, and later I trekked by myself to find the highest point on the island.

We spent a lot of time reading, conversing and soul searching. We discussed education, adventure, environmentalism, community; it was so refreshing to be able to speak freely with open-minded people in such a beautiful setting. Being away from society gave us the freedom to question everything without fear of judgment.

November 2, 2013 · Twitter

ISLAND IS INCREDIBLE. TOO MUCH FOR WORDS. CAN'T WAIT TO SHARE OUR EXPERIENCE W/ YALL. SETTING SAIL ON THE 4TH.

That night, we saw a ship approaching with a huge search light scanning left and right. We thought they were coming for us at first. We watched as they approached the island and anchored a few hundred yards to our north. In the morning light, we saw it was a large luxury yacht. We walked the beach to get a better look, but nobody came ashore or spoke to us. They motored away a couple hours after sunrise.

At 9:42 AM on Day 6, a Coast Guard helicopter circled us. Again, I thought they might harass us, but it came and went within a few minutes and never attempted to make contact.

Day 5 and 6 [30 sec video][167]

We slowly constructed the Air2Water Tower between spear fishing, exploring and conversing. We carried plenty of water, so the system was more proof-of-concept than tool for survival, but on Day 6 we finally got the whole thing connected. There wasn't enough wind that day to actually charge the batteries to power the dehumidifier, but I filled the water tank with freshwater from the boat and took my first shower since departing the

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[167] https://youtu.be/UsfNHu93h7M

Dominican Republic.

Air2Water Tower on Little Inagua [2 min video][168]

November 3, 2013 · Twitter

Setting sail tomorrow, any tropical storms headed our way? See y'all soon!

Little Inagua to Key West – *Nov 4, 2013*

The morning of disembarkation, we found much of our gear had been swept into the ocean by a rising tide. I donned my snorkel and dove in to retrieve as much as possible. I found my Sovereignty hat on the bottom of the sea, along with some flippers and one of Ben's shoes. We collected as much as possible before kayaking back to Sovereignty and raising anchor.

We sailed south to hug the coast of Cuba, making pretty good progress with favorable easterly winds. Time slowed down again as we re-acclimated to boat life. Night followed day, day followed night, clouds came and went, and we sailed.

We hit lots of storms as we made our way West. None were as intense as the squall off Hispaniola, but they were long and exhausting. We took turns sitting in the rain steering, taking down the sails when the wind was too heavy, and raising them again when things calmed down.

The darkness of the open ocean was incredible, although remarkably easy to adapt to. Our eyes had no problem adjusting, and it was rather easy to move about the boat without using lights.

One thing I never got used to was passing large ships at night. They seemed to play a game with us, seeing how close they could get, even though there was plenty of room all around us. Whether they were checking on us or trying to spook us, I can't be sure, but it was nerve-racking every time.

We considered trying to illegally immigrate onto the forbidden island of Cuba, but we were too low on food and cash to risk any problems with authoritarians. We got close enough to see houses, and almost ran aground near Cayo Romano. Sean was at the helm, but hadn't noticed how shallow the water was getting. I woke up just in time to see a man spearfishing near a small dingy and made the call to tack immediately.

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[168] https://youtu.be/ChLQxHX6PsA

We caught a large tuna on this leg of the journey, bringing indescribable joy to our crew. Unlike the shark and barracuda, we knew this fish was edible, and immediately set to work filleting and cooking the catch.

Bloody Tuna [15 second video][169]

Besides the tuna we caught about a dozen barracuda, but after getting sick on the island, none of us wanted anything to do with them. It was unfortunate we couldn't catch anything else, because food started running low with 270 miles still to go.

Low on Food [1 min video][170]

As we crossed the Gulf Stream toward Florida, the waves built to 7 or 8 feet, long rolling peaks and troughs. Sailors often cross this hazardous stretch of water in a group of ships during a good weather window, but we were alone and had no way of obtaining a weather forecast. We caught another gorgeous sunrise as we rolled with the ocean, making good speed towards our destination under full sails with a strong southerly wind.

Last Sunrise [30 sec video][171]

November 10, 2013 · Twitter

You don't have to run away and hide from life in those houses and office buildings, the real world isn't so bad.

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[169] https://youtu.be/YnFnOgiBwwM

[170] https://youtu.be/sy677fsmeJg

[171] https://youtu.be/6XrPgpb0Bv8

Reflections from Key West – *Nov 11, 2013*

We arrived after a beautiful sunset on November 11th following a few days of heavy winds, high seas and cloudy skies as we crossed the Gulf Stream. I only mention the clouds because we drained our batteries and couldn't start the engine for the approach. But Sovereignty's a sailboat and we were ready to go ashore, so we sailed in from the South along the main ship channel. Another captain called it the Washing Machine, and I can't think of a better description. We were getting beat up by the wind and waves, fighting to stay in the channel and praying we could make our way to anchor without the motor. Even worse, there was barely any charge left on the laptop which doubled as a chartplotter, so I was doing my best to navigate based on memory from the one night I spent there in July of 2012. We had enough juice to check our position 3 or 4 times for a few seconds each, and try to memorize the route to our anchorage. We mistook part of Key West for Sunset Key and checked the computer just in time to pull a quick controlled jibe and avoid running aground, but that was the end of the laptop battery. We finally made it around the SW point and into a protected harbor where the waves died and the wind dropped to a nice 10-15 knots, but we had to fight a 2 knot current pushing us back to sea. We sailed close-hauled towards Fleming Key where I planned to anchor, passed the marina I had considered trying to sail into, but ended up hitting the sandy bottom in a shallow anchorage off Wisteria Island. Like my dad used to say parking his car, "We're not there till you feel a bump." We were there.

Marc pulled out his iPhone to make a call, but dropped it into the drink. Luckily I had backed it up for him on Little Inagua, but the last week of gorgeous pictures and videos were lost in an instant.

We had to sleep another night at an angle, but that wasn't hard. The hardest part was smelling the tantalizing scents of fresh food while we were stuck aboard eating MREs and canned tuna.

A bunch of people dinghied over to help the next day. Our new pal Eric set my anchor out in deeper water so we wouldn't drift if the tide rose, and Taj let us borrow a battery to start the engine. At 6pm we motored off at high tide, but just barely. We had to raise the sails to heel over and reduce the draft, running full throttle on the engine and pulling on the anchor line we slowly made our way out of the sand. We went into the marina and walked on dry land for the first time since Little Inagua a week earlier.

Key West was a lot of fun. The people are cool and it felt so good to eat real food again. We cut it incredibly close on the rations for the voyage. It seemed like we had plenty of food and freshwater when we set off, but by the end we were boiling and filtering dirty water from the tank, and sifting through a moldy bag of rice for the good bits, 'cause there was little else to eat. My last two meals on the boat consisted of tuna in tomato paste. Two days later I ate the greatest meal of my life at Blue Heaven, courtesy of my crewmate's mothers. They called ahead to prepay for our fancy dinner. Each of us got the surf and turf, lobster and filet, and the joy it brought us is indescribable. Later the joy turned to pain as our stomachs were stretched beyond capacity.

The last month feels like a year. I couldn't begin to tell all the stories in these pages, but we captured some incredible footage and I can't wait to share a taste of the adventure with all of you when we release our film. We're working on another trailer as I type, and I'm trying to have the movie ready in about a month.

I hope it lives up to your expectations. I tried to emphasize from the start that this was all improvisation and we had no idea what was going to happen. We only stayed a week on the island, didn't exactly build what I had imagined, but the real goal was to find out more about ourselves and the Universe, and I don't think I've ever learned more in a month.

I also came to realize it's time to sell Sovereignty. She's treated me well, but she was always a means to an end. A sailboat is a cheap way to explore the islands, but they're slow, expensive to maintain, and have to stay anchored in deep water. I'm looking to downsize. I've learned this boat is more than I need, and this tool I used to free my mind has become a ball and chain.

For my next house, I want to build a canoe with trolling motors on outriggers with a retractable solar panel roof, probably a 17' aluminum Grumman. And I want to be able to tow it behind an electric bike that I can store aboard. That way I can go just about anywhere, land or sea, and carry plenty of supplies and a comfortable place to sleep. A canoe like that would probably beat Sovereignty in a race, plus I could drag her ashore and sleep easier knowing I'll never drift at anchor.

When I told my brother, he couldn't believe it. "What about your donors? Didn't you promise them a sail to the island? Didn't you say you were going back to establish a colony?"

I did, and I still want to, but I figured out a sailboat isn't the best tool for the job. And Little Inagua might not be the best spot, either. I love that island, but it will be difficult to settle. It's beautiful, but almost deceptively so. The harsh terrain, little rain and tiny stinging insects make formidable challenges. We need more tools and more people to settle an island like that, and I need more money if I want to make that happen. But in the meantime, I believe I can help people more effectively if I work where they live, and make it easier to participate.

I baby stepped my way up to this lifestyle, so it's difficult to ask people to just dive in. I want to show people how they could take their own baby steps toward greater autonomy, and I'm thinking a river bank might be a better place to start. That's why I'm planning a Free Academy Campout along the Brazos for the weekend of December 13, 2013. There will be a nice meteor shower that weekend, and a big waxing gibbous moon. I still need to work out the details so I'll keep y'all posted, but I'm hoping to have the film ready to screen by then. Everyone's welcome, after all, it's not MY river bank. I'm picturing something like what we did on the island, or a Burning Man festival. We'll build whatever we like, spend a lot of time relaxing, conversing, reading and reflecting, then leave without a trace.

Chapter 8

Selling Sovereignty

Alone in Key West – *Nov 20, 2013*

After a few days in Key West, my crewmates headed back to Katy and I was alone again. I spent a couple weeks getting the boat ready to sell, but after I realized how long it might take to find a buyer, I decided to leave Sovereignty at anchor one more time so I could go home for the holidays. My mom bought my ticket as a Christmas present, again, this time scheduled for November 27, just in time for Thanksgiving.

I was having trouble finding a good anchorage in Key West. At first, I anchored off Fleming Key, but one night during a storm I found myself drifting and Sovereignty very nearly slammed into another boat. I had to physically hold them apart, standing naked in the freezing rain with one foot on Sovereignty and one foot on the other boat, until Sovereignty drifted far enough downwind to clear the other ship. My batteries were dead so I couldn't start the engine until morning; I was at the mercy of the ocean. Luckily my anchor caught hold of the seafloor before I hit another boat and I was able to start the engine by 9 or 10 am.

I searched the harbor for a new spot to anchor, and hit the jackpot just south of Wisteria island. After dropping my Danforth into the sand and digging it in with the engine, I swam down to check if it had dug in, when I discovered a mess of chain on the ocean floor. I followed the chain to find a sunken mooring ball attached to a large concrete block. I attached my own chain to this foundation using an anchor shackle, and after a day or two I was confident it would hold my boat indefinitely.

Flying Back to Texas – *Nov 27, 2013*

On the day of my flight, I caught a ride to shore with my belongings in Taj's dinghy and walked the three and a half miles to the airport. I didn't have anything else to do and didn't want to waste any money on a ride, plus I didn't really mind the exercise.

Flight Number 4996	**Flight Number** 3280
Departs 11/27/13 2:20 pm	**Departs** 11/27/13 4:45 pm
Key West, FL	New Orleans, LA
Arrives 11/27/13 3:15 pm	**Arrives** 11/27/13 6:05 pm
New Orleans, LA	Houston Bush Intercont'l, TX

When I first got back, I felt victorious. I was proud of everything I had accomplished, and I was excited to begin working on the Free Academy. But that feeling faded fast, and I found myself in a negative thought spiral that lasted a few months. A lot of things contributed to it and they fed back on each other until I dug myself into a deep psychological rut.

The Free Academy Campout on December 13th didn't happen. It rained a lot that week so the banks of the Brazos became a swamp, and only a few people wanted to go anyway. Editing the movie was fun at first, but sorting and compiling all of our footage from a GoPro and four cell phone cameras took forever and it was hard to weave together a coherent story. Sean and I spent hour after hour giving each clip a name and organizing them with Windows MovieMaker, and on December 28th we released our first cut at Marc's house for our families and close friends.

I wasn't especially proud the way it turned out. We had some amazing shots, but I didn't feel like we really did what we set out to do. I wasn't even sure what exactly we set out to do anymore. I lost my passion for the project. It took a long time for me to put the finishing touches on the movie and release Freedom Propaganda to the world.

I spent all of January feeling lost. I didn't know how long it might take to sell Sovereignty, and I wasn't sure what I was going to do after I sold my home. I wasn't even sure if she was still afloat on my makeshift mooring in Key West. But I knew the only way forward was to drive back and see, so I hit the road in my red F150, excited to start a new chapter in my life.

Driving Back to Florida – *Feb 1, 2014*

I drove 17 hours straight by myself to my grandparents' house near St. Petersburg, arrived about 7 am and passed out in their guest bed. I woke up in time for a delicious dinner and watched the Super Bowl before exercising, meditating, reading and going back to sleep. I was definitely trying to turn over a new leaf.

Woke up to nice breakfast and a flat truck tire. Changed it in no time, thanked my grandparents for their hospitality and hit the road by 10am. I arrived in Key West at sunset and my boat was still there! What a relief. At 8:30pm I ate 1 gram of psychedelic mushrooms and 1 Smartie with acid on it. I've had some wonderful experiences with hallucinogens before and I believe when used with respect they can help us gain insight into ourselves and see the world in a new light. I kept notes in my journal during the trip:

- Long walk, pretty lost at 10:15pm.
- There is no home base where everything is safe and normal. We're floating on a dust mote.
- 10:30pm still tripping, clear, not much visual
- People get good at the things they enjoy practicing.
- Probably about 3am, trying to sleep in the bed of my truck next to the water by the Coast Guard station, super restless.
- Perfect temperature

I didn't get much sleep, woke up at 8:30am and drove for coffee, then went to the library to fill out an information sheet for my boat broker. I posted a gold coin for sale on eBay to hold me over financially until I sold Sovereignty, then paddled my surfboard out to the boat. Sovereignty was anchored a full mile offshore. A Coast Guard vessel saw me paddling and asked if I was thought it was safe to paddle across the channel. I said I didn't have any other way to get to my boat and asked them for a ride. They said they couldn't but followed me for safety. It took like 45 minutes, by the time I got there my arms felt like they were made of jello. My boat was a mess. I paddled the leaking yellow kayak back to shore, then went to TGIFridays and used a gift card my grandparents gave me to buy dinner. I went to the store, then back to library and downloaded the audiobook of “Quiet: The Power of Introverts in a World that Can't Stop Talking”. Fell asleep listening to it in the bed of my truck.

Quiet Revolution by Susan Cain[172]

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[172] http://www.quietrev.com/

The rain woke me up at 12:30am and I relocated to cab of truck where I slept on a lumpy mess of bags and suitcases after writing the following to-do list in my journal:

1) clean boat
2) take pictures
3) fix batteries
4) fix furling system
5) fix cabinets
6) sell dehumidifier, surfboard, wind turbine, fishing gear.

I woke up at 8:30am, went to the store for cleaning supplies and made 4 trips to the boat and back, 8 miles of kayaking total. I removed all the trash, tidied the boat up and took pictures for the broker. I set off 3 bug bombs to kill the roach infestation, paddled to shore and emailed the pictures to the broker. Slept in my truck again.

The next few weeks I cleaned and repaired the boat, sold everything I could and started looking for a job. I was alone again, and didn't really do a good job of putting myself out there to make friends. I mostly slept in the back of my truck rather than on the boat since I didn't want to have to re-clean the boat and it took so long to paddle out there in the kayak. I went to McDonald’s and the library often to get online, I watched a lot of lectures, and I kept listening to the audiobook of Quiet, which quickly became one of my favorite books. I got some nibbles on the boat and landed a job as a personal IT assistant to a wealthy entrepreneur named Randy who made a killing selling ad space in Sports Illustrated out of his living room. The job was in Tavernier, though, which is two hours from Key West along the Overseas Highway. I considered living out of my truck up there, but since Randy offered me $500/week in cash I figured I could afford an apartment. Housing in the Keys is crazy expensive, though, so the best deal I could find was $650/month living in a room in a house with a middle-aged couple, Tom and Jamie Flatley. I figured I just needed it for a couple months anyway and it was a no-contract arrangement, so I decided to move in and played house in Tavernier.

Playing House in Tavernier – *Feb 21, 2014*

I spent the next few weeks working with Randy drafting emails and brochures for magazine ad space, although we could never call them ads when communicating with customers. We were “offering an exclusive opportunity to be featured in Sports Illustrated”. It was interesting to see a real salesman at work. I started to see business from a new angle. Randy moved fast because turning a profit depended on lots of calls and emails, since the hit rate was so low. But I started to see that even with a low hit rate, if you contact enough people you can sell just about anything.

I didn't do a whole lot in Tavernier besides work with Randy and hang out in my room at the Flatley's. I didn't make a very good effort to make friends. I played on the internet and watched movies, worked on the Freedom Propaganda documentary and finally released it on March 1.

Freedom Propaganda [1 hr video][173]

One of my few social interactions in the Keys was with an old friend from high school, Cuong Tran. I was so grateful when he messaged me about his upcoming vacation to Marathon and asked if I wanted to meet up. We hadn't spoken in years, but it was really fun to reconnect and meet his friends Meagan and Tilly. We chilled on the beach, drank beers, kayaked and paddle boarded, and had some really good talks about overcoming introversion and disagreeing without condescension.

I got some nibbles on the boat both through Craigslist and through the broker but after a month in the Keys I wasn't any closer to selling it. The broker's deal was a flat rate $2500 which they would add on to my asking price, and I was free to try to sell the boat on my own. On March 7 I got an offer through the broker where I would net $9,500 and I decided to accept. That was $2,000 more than what I bought it for, although I had sunk a lot of money into repairs over the years I definitely felt like I was coming out ahead.

The purchase was subject to an inspection by a marine surveyor, so on March 16 I drove down to meet Allen at the dinghy dock in Key West. He drove us out to Sovereignty on his dinghy, and went through his in-water inspection, but I needed to drive the boat to a marina to get hauled-out so he could check below the water-line. It was my first time moving Sovereignty in four months and it felt great. I got to feel the ocean breeze again and I saw a bunch of Portuguese Man-o-war floating in the Gulf of Mexico on the way. I left Sovereignty tied up in the marina to get inspected the next day, and Allen drove me back to my truck by the Coast Guard station. I made the reverse trip the next day and left Sovereignty back on her mooring, unsure as to how she was described in Allen's report.

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[173] http://freeacad.com/2014/03/mf/freedom-propaganda/

I didn't hear anything for over a week, but the buyer officially accepted the deal on March 24 and we worked out a schedule for payment and delivery. Mr. Flatley asked for the next month's rent and I decided on the spot to move out in a month, since I had already paid two months rent up front and I really didn't want to spend any more money on a bed.

I arranged to work remotely with Randy so I could keep my job after I left Tavernier, but I wasn't sure exactly where I was going or what I was going to do next. I kept working on the Free Academy website and initiated some video conversations with other members of the community.

Free Academy Video Conversations – *April 2014*

Sean on Travel[174]

Amanda on Religion[175]

Munoz on Education[176]

Byrd on Thinking[177]

Michael on the Point of these Videos[178]

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[174] http://freeacad.com/2014/04/mf/sean/

[175] http://freeacad.com/2014/04/mf/amanda/

[176] http://freeacad.com/2014/04/mf/munoz/

[177] http://freeacad.com/2014/04/mf/byrd/

[178] http://freeacad.com/2014/04/mf/just-for-fun/

My Last Day with Sovereignty – *Apr 10, 2014*

On April 10 I gave Sovereignty to her new owner, and the series of events that took place still feels unbelievable to me. The following is copied from my journal exactly as I wrote it upon getting home that night:

The last 7 hours of my life feel like a month. I'm still coming down from it. Randy said to work a half-day, 11-3, and then I left to go deliver the boat to the buyer in Key West. I've already received the check from the broker but I haven't cashed it yet. I have the title and registration ready to hand over to the buyer. I leave Randy's at 3 and I'm supposed to meet this guy at 5:30, so I'm already cutting it close cuz it's a little over 2 hour drive. But I realize I only have $20 on me (and only $8 on my debit card) and I'm going to need gas to make it to Key West and back. I also might need my kayak unless I catch a ride at the dinghy dock. So I rush back to my house in Tavernier (20 minutes backwards), grab some cash, the kayak and some hard apple ciders and hit the road again. Luckily I had picked up that shipment of ganja this morning so I was able to smoke on the way down, first time in like a week so I got real high. Called Marc on the way. I call Bryan as I'm pulling into Key West around 5:45. Bryan, the buyer, is all worried because he's supposed to return his rental car at 6:30. I offer to meet him at the rental car return and drive him over to the dock before I go get the boat because we might not make it in time but he doesn't want to do that for some reason, just says try to hurry even though I explained that I have to kayak out to the boat.

So I go park where I used to, near the Coast Guard station. I'm about to launch my kayak when I look out to where Sovereignty should be and she's not at her mooring. She's just not there.

It's hard to describe my emotions at that point. I was insanely calm. Almost like I expected it. I felt fear and dread and panic, but they were buried deep below. All I could think of was the steps I needed to take from there. I decide I need to get a better look. Maybe it just drifted or something and it was still around there.

First I walk out the main marina pier, but I can't see anything. So I go over to the dinghy dock to try to find a ride out there. I ask one guy, but he said he was headed away from there and was already late. Wouldn't even take $10. Talked to my old crazy drunk friend Troy for a minute. He's still got his nasty mangy dog and he's talking to a 40ish year old lady who's way too attractive to be hanging around him. I mean she wasn't that great, but he's a crazy broke drunk liveaboard with dreads and she was normal looking.

Anyway, I see another guy about to take off in a dinghy. I jog over there and ask for a lift. He tells me he's only got one life jacket so I have to jump overboard if the Coast Guard comes and act like I'm swimming. I laugh and say sure. He says "No I'm serious, if the Coast Guard comes you have to jump overboard. I got a ticket last month." So I say sure.

We get about half way out there in his inflatable and I tell him I can't see it. I don't think it's there. He's pretty helpful and sympathetic, we drive around Wisteria Island looking for it. I don't see it anywhere. He doesn't know anything about it. But he gives me some advice about what I should do next, says to call the Coast Guard and the Police and maybe Florida Parks and Wildlife, and maybe some tow boat and salvage companies to see if anyone knows anything about it. He drops me off back on the main marina pier next to the dockmaster's office next to these 4 guys with a bunch of gear sitting on the dock waiting. He yells at them, "Looks like all y'all need now is a boat!". I offer him some money but he won't take it, just says good luck with the boat.

Turns out the guys on the dock right where we pull up are the buyer, Bryan, and his three older sailing buddies. Luckily he decided not to bring his wife and kids. It took me a minute to process who he was though. He said "Hey Michael? I'm Bryan." Even after that I didn't realize he was Bryan the buyer. I'm terrible with names and faces so I just assumed it was someone I was supposed to know. My mind wasn't working very well at that point. Eventually I figure it out and had to explain piecemeal how the boat was missing and yes, I'm the seller and I don't know what to say or do but I'm going to call some numbers. He's surprisingly cool about it but clearly distraught underneath.

One guy's laughing in disbelief. None of them really knew how to react. Another guy's saying this must be a scam, but Bryan says "Well then why would he show up?". I'm explaining how it's been on that mooring for almost 6 months and I don't know what could have happened, whether it broke lose or got stolen.

I call the Coast Guard first, and they transfer me to the Sheriff. Explain the situation to him, he gives me some tow boat numbers to call and tells me to file a police report with the Key West PD. I call them next, give a description and they say they'll send an officer to take the report.

Next I call Sea Tow, a nice lady takes some info and says she'll ask around but she hasn't heard anything about it. She says I should try Magic Penny, offers me the number but the Sheriff has already given it to me. Next I call "Magic Penny". It's this French guy with a pretty strong accent, and knows exactly what I'm talking about.

He says he got called and pulled the boat off Sunset Key a couple days ago after a really strong gale blew through on 4/8. He says he put Sovereignty on one of Eric's moorings. (Eric helped me when I first ran aground in Key West in November, set an anchor out in deeper water and offered to tow me for a fee and rent me a mooring). He tells me how to find the boat and mentions the usual fee is $500-$1000. I tell him I'd be happy to work something out, I just want to go check on the boat first.

So I go back to the dinghy dock and offer a guy $10 to take me out to the boat. “I really need to get out to my boat. Would you take $10 to drive me out there?” “Sure”. This dude is drunk as shit and he's working on a 40, 3 more in a bag. He's got a huge, heavy, deep fiberglass dinghy. I tell him what happened and he seems to know about my boat. Said he saw it drifting around and getting close to some other boats, bouncing around like a pinball. We drive by an old trimaran with a huge gash in the side, and he says my boat probably did that. I believe it, my exhaust pipe is super sharp, and once before during a storm it nearly ripped into a boat on Flemming Key. Only that time I was there to hold them apart (naked in the freezing wind + rain).

We drive North of Wisteria where Magic Penny said he moored my boat, but we still can't find Sovereignty. I gave Magic Penny another call, hand the phone over to my drunk driver. They talk for a minute and he finds out where to take me, right next to his boat apparently. He's a talker and telling me how much shit I could be in and how lucky I got and how I owe these people money (like a thousand to the tow guy and a hundred to the mooring guy). He says if people knew it was my boat that caused this damage they might try and sue me and how his help should be worth more than $10. So I give him another $10 when we get there and say "Hey man I appreciate everything and thanks for not telling too many people about this" and he kind of agrees he won't tell anyone.

So I climb aboard and start the engine. Luckily it starts right up. Those new batteries are good. I open the hatch to check on things in the cabin, and there's 3 inches of water ABOVE the floorboards. Above the wood floor where you're supposed to walk, not down in the bilge. Like Sovereignty is slowly sinking. So I grab a bucket and start bailing.

I probably scooped a good 150 bucket fulls over 15 minutes until the water was below the floor, still full to the brim in the bilge. But I decide it's low enough to head to the marina and get this thing to dock. The buyer is still waiting on me. He knows I'm on the boat and I had told him the motor started and I would be on my way soon before I knew about the water in the cabin. That must have been 20 minutes ago by now and I said I'd be about 20 minutes.

The engine's still running and I test my transmission (always a good policy before releasing from dock/anchor). It works, I hear it click into gear. I shift back to neutral, go up front and start untying from the mooring. It actually took a while, pretty strong wind and I had to pull the boat up to the mooring and undo some knots. I finally set her free and run back to put it back in gear and start motoring to the marina. I get 100 yards and the engine dies. I'm adrift with no motor and no way to raise the sails and it's pretty strong wind and there's no way to go back to the mooring and I'm quickly drifting towards another sailboat.

Again I feel that panic and dread deep down, but I gotta admit, I've got an amazing gift for calmness in intense situations. I felt the adrenaline coursing through my veins. Quickly deduced there must be a rope wrapped around my propeller. This has happened to me before and I just knew from the way the engine shut down. And now in hindsight I remember seeing a rope alongside my boat as I was approaching in that dinghy. But I didn't remember that then, I just knew it.

I strip down to my boxers in half a second and dash downstairs for a knife. I had literally 2 personal items left on that boat, and it was a knife sitting in the knife holder on the wall and that snorkel gear in the cooler. I had thrown all my silverware overboard, all my pans, all my forks, knives and spoons. Everything else was off the boat, either in my truck or sold. Literally everything. Everything except one knife and the snorkel gear in my cooler.

But the knife was there and I grabbed it and climbed back up into the cockpit. The boat is still drifting pretty quickly down wind towards that other sailboat. I grab the wheel and try to miss him. You can steer a boat with forward momentum from the wind even without a motor or sail up, at least a little. I steered enough to miss, and the guy's out on deck yelling at me, mainly concerned. I yell back what happened, I don't think he understood, but I slid the snorkel mask over my face and jumped overboard with the knife. Sure enough there's a rope around the propeller shaft.

I start sawing away at it for 5 seconds or so then come back up for air. My heart's racing and eating up all my oxygen. I realize I need to hold my breath longer to get this shit done. I start concentrating on breathing. No use diving down for 2 seconds of cutting, I need to take my time and catch my breath before diving again, even though it's against every instinct that's saying "hurry hurry hurry!".

It only took a few dives to cut most of it free, but I think it might be enough as I see the seafloor looming larger beneath me. I climb back up the swim ladder and start the engine. It starts, I click it in gear, and it dies. I jump back overboard. Saw away some more rope, just 2 more dives and the propeller shaft's pretty clean, just some really tightly wrapped coils that probably won't keep it from spinning. I climb back up, start the engine, click it in gear, and it keeps going. I crank up the throttle and head for the marina.

That entire sequence from when the engine first died to now spans about 2 or 3 minutes.

Afterward, I still have a good 10-15 minute drive, and every second I think it's about to die. Besides the rope, I have no idea what else might be wrong with it. I reflect on how I didn't even know the rudder would work when I let loose. It had run aground! The saltwater intake could be clogged, the cutlass bearing was already loose, it could have broken free. And of course the whole way I have auditory hallucinations that the engine rumble is changing pitch and slowing down. But it wasn't, and I made it. I pulled into the marina and tied up at the dock next to the guys. I tossed them ropes and they helped bring her in.

Now I have to explain why the floor's all wet. I tell them the truth, I don't know how it happened, it wasn't like this when I was here for the survey. I turn on the bilge pump, and at first it does nothing. Again some panic and dread, these guys definitely expect a working bilge pump (although I've only ever had intermittent luck with them). I stick my arm into the flooded bilge and feel around for the pump, pick it up and shake it a little (although technically it should be bolted down), and rub my finger around the intake. I go outside to check if it's working, but there's still no water coming out. I stick my finger in the through-hull to help create a vacuum and somehow that got the bilge working and it started flowing pretty fast, faster than it's ever worked for me actually. Still took over an hour to pump dry though.

The buyer's pretty worried the whole time. I'm kind of sitting there frozen with a mix of disbelief and a not knowing what to do or say. Eventually I tell them I need to get a drink and walk over to the corner store for a 6 pack of Rolling Rock. Bring it back and hang with them for another hour or so checking stuff out while the bilge empties. Once it's done and I've helped as much as I could, I tell them I still have a 2 hour drive home and I have to work tomorrow and ask what they want to do from here. Bryan says he still needs to take the rental car back to the airport, so he follows me over there and rides with me back.

That was a little awkward. I did a pretty good job of keeping it light though. I'm usually bad at small talk but I did OK and stayed off the sore subjects (like how he got charged an extra $60 for the late return). I asked him about his past and family and sailing experience and stuff. We got back and I asked if he wanted me to park and walk back over there with him. He says yeah... I'm still not sure how this is going to play out. Whether he's going to accept the boat or not. Still thinking he might try and back out. I still haven't cashed the check, but he's already transferred the money to the broker. So I'm not sure he could back out. But the contract says any damage sustained until he takes possession is on me I believe. Anyway, I walk over there with him, and the guys are pretty satisfied that it's a really slow leak. The water hasn't come in noticeably in the hour we've been gone. So we shake hands, I wish them luck, and head to my truck. I'm almost giggling as I walk away, giddy. I still can't believe it. I drove back, drank those hard ciders on the way and smoked a bowl, called my sailing buddies and told them the story and now I'm typing it up. Holy shit.

Chapter 9

Post-Boat Life

The day after selling Sovereignty, I took my check for $9,500 to Wells Fargo and cashed it for 95 $100 bills. They hated that. The teller called over a manager who tried to convince me to open an account with them, but I explained that I didn't trust banks and I preferred to keep my money outside the Federal Reserve system. A few days later I drove up to Miami and bought 100 ounces of silver and an ounce of gold with my cash.

I kept working on the Free Academy website and starting video conversations with other students/teachers.

Free Academy Video Conversation – *Apr 17, 2014*

Tyler Olsson on consciousness, reductionism, and reasons [21 min video][179]

Northbound – *Apr 18, 2014*

A week after cashing the check, I said farewell to Randy, moved out of the Flatley's and started driving aimlessly North. I slept in a rest area and consciously fell asleep with my AC on and engine off, knowing I'd be able to get a jump the next day in such a high-traffic location. I drove northwest for a long time without checking where I was and eventually found myself at Lookout Mountain in Georgia. I went on a mini-adventure trespassing on the incline-train to smoke some cannabis overlooking Chattanooga, Tennessee. I watched a beautiful waning gibbous moon glow red above the clouds on the horizon, followed by a stunning sunrise a few hours later.

I spent the next few days working for Randy out of Vogel State Park, which has really fast WiFi and nobody checking for entrance fees. I lived out of my truck, sleeping in the bed at night and working on my laptop in the cab during the day. After I finished up work for the week, I drove up to Boston to see some of my best friends, Andrea, Vicky, Sean and Daniel. I hung out in New England for a while, drove over to see Niagara falls, back South to Maryland to Daniel's house, then West to New Orleans to hang with my buddy Byrd before going back to Texas. I worked off-and-on for Randy out of my truck throughout the road trip, but he began to cancel more and more days of work due to medical issues.

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[179] http://freeacad.com/2014/04/mf/tyler/

Westbound – *May 8, 2014*

I got back to Katy in time for Mother's Day, and by then it was starting to feel like the job with Randy was coming to an end. I made a “possible next moves” chart to help me decide what to do next:

Potential Next Moves – May 13, 2014 [picture][180]

I spent a few weeks in Katy hanging with friends and making videos for the Free Academy. Benjamin and I bought a used canoe and illegally immigrated into Mexico for a few minutes, to prove how easy it is.

Illegal Immigration [45 sec video][181]

Melissa – *May 28, 2014*

You might have noticed I haven't mentioned anything about romantic relationships in this book, and that's because I didn't have any. I'd never had a girlfriend before. In college I really didn’t want one. Once I decided to go on my big sailing adventure after I graduated, I became worried about getting tied down and trapped by a girl. I thought if I let myself fall in love, I would wind up stuck. But I didn’t really pursue too many “flings” either. It might sound funny coming from a guy, but I need some element of trust or a connection to feel comfortable. And once I graduated and moved on the boat and started sailing East, girls just fell off my radar. I had this one-track mind focused on freedom, and the idea of looking for a partner just wasn’t a priority.

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[180] http://i.imgur.com/b3CtS6J.jpg

[181] http://freeacad.com/2014/05/mf/illegal-immigration/

I slowly came to realize what I was missing. I was totally free, but I was also pretty alone at times. Like Christopher McCandless realized too late on that bus in Alaska, “HAPPINESS ONLY REAL WHEN SHARED”.

I became more aware of my loneliness and got stuck in a real bad feedback loop that messed up my confidence. After ignoring the opposite sex for so long, I felt inexperienced and awkward and messed up a few attempts at getting close to some girls and then beat myself up over my mistakes and felt even less confident. I got stuck in a rut for a while. I had some close calls, some mutual interest, some missed opportunities and some heart ache, but for whatever reason things never worked out until I met Melissa at Traci's poetry reading at Notsuoh.

We hit it off instantly, and the next day she went canoeing with Benjamin and me in the Gulf. She wasn't phased at all when the canoe sank in the breakers. We dragged everything ashore and dried off before watching a storm roll in. We hung out for a few days but my plan was to continue my cross-country road trip, and on June 1 I drove up to Dallas to stay with my friends Jared and Linda. I kept talking to Melissa, and two days later I drove back to Houston to see her. Then I left again on my road trip, drove back to Dallas and dropped Jared and Linda off at the airport on my way out of town.

Then I decided to try and see a tornado, so I drove aimlessly Northwest chasing some thunderstorms. That night the sky cleared, I slept in a cornfield in Kansas and saw the Milky Way for the first time since the boat. I fell asleep shortly after a meteor ripped across the sky.

I chased some more thunderstorms the next day through Kansas and Nebraska along some dirt roads in the middle of nowhere. Never saw a tornado. I started heading West on I-80 to visit my friends Nick DiIorio and Nikki Gould in Denver. I spent a week hanging out and exploring Colorado, going to microbreweries, smoking legal weed, hiking and climbing around Garden of the Gods and the Flatirons. I was surprised when our mutual friend Brad Welsh showed up a few days later, and together the four of us went on a white water rafting adventure and attended a Thievery Corporation concert at Red Rock Amphitheater.

After leaving Denver, I drove 21 hours straight, 1200 miles by myself to Lake Tahoe to visit Sean. We chilled for a few days, swimming in the lake and hiking with his cousin Kyle and Kyle's dog Stella. I continued talking to Melissa often, and invited her to fly out and join me. She agreed to meet me in Reno and ride with me to the Pacific. Her flight arrived the same day Sean left for Alaska for a fly fishing job, so I dropped him off and picked her up at RNO.

We stayed at Circus Circus the first night, where my mom had a reward coupon for a free room in the hotel, but after that it was camping and couches only. First we drove up to Lake Tahoe, then south towards Mono Lake. We spent the first night on a rocky stream bank off US-395, woke up freezing in the middle of the night to add more layers. I was grateful to see my truck still parked on the shoulder in the morning, and relieved when the engine started without problems. We grabbed coffee in Lee Vining after exploring Mono Lake, then headed into Yosemite National Park.

The sights were stunning; Melissa and I had a blast living out of my truck, hardly spending a dime in our exploration of the West coast. We made our own sandwiches for almost every meal, along with the occasional Ramen noodle soup or oatmeal, and never payed for a bed throughout the whole journey. Our only expenses were groceries, gas, beer and fast food.

After Yosemite we drove to Lompoc, California, to try and witness a rocket launch at Vandenberg Airforce Base. We arrived a day before the launch, and immediately tried to work our way onto the base for a better look. The first night, we camped at the end of a dirt road on US Air Force territory, but I don't recognize their land claim so it made no difference to me. We got spooked in the middle of the night by an approaching truck, but for whatever reason it turned around and left without communicating with us.

The following day, we went to a golf course that bordered Vandenberg and followed a deer onto the base. Soon, we realized we were on Air Force property again, and decided to head back to the golf course before we got caught. Unfortunately, we turned around too late, and a military police SUV stopped us. They questioned us and said we'd have to be interrogated at the Office of Special Investigations. We were separated, handcuffed, finger-printed, searched and put into rooms with one-way mirrors. Melissa sang “I Want to Break Free” by Queen while waiting on our captors to ask her questions. I sat silently in the adjacent room, but after a few questions they were satisfied that we weren't a threat, and released us after searching my truck. After that, we tried to find a decent vantage point for the launch at the Lompoc-Surf Amtrak station, but the same Airmen who kidnapped us showed up and kicked us out of there too. We went up a tall hill to try again, which seemed to be where most rocket enthusiasts went. About 20 cars parked near us, and we eavesdropped on our neighbor's radios tuned into mission control, but with T-46 seconds to go the launch was scrubbed due to a water issue on the pad.

Launch of NASA's Orbiting Carbon Observatory-2 Scrubbed [NASA News][182]

Liftoff was rescheduled for the same time the next day, but with the Pacific fog all we saw was a glow in the distance and the roar of the rocket.

We left that night for San Francisco, camped on the side of the road for a few hours, then continued the next day to meet up with Tyler Olsson. He showed us all around the Bay Area. We went up Mt. Tamalpais our first day to see the breathtaking view of the city. We walked to Stern Grove to see the San Francisco Symphony perform an afternoon concert. We played disc golf in Golden Gate park, watched the fireworks on the Fourth of July, and played soccer on the beach, before Melissa had to fly back to Houston.

Flying Back to Texas *– Jul 18, 2014*

By that point, my F150 was falling apart, and I was excited to see where things were going with Melissa. I sold the truck for $1,400 and caught the next plane back to Houston. I moved in with Melissa into her garage apartment in the 3rd Ward, and soon after I created a job for myself redesigning the website at the cafe where she worked.

We both longed for another adventure, and began exploring the possibility of living in the woods in Houston. We were excited about the opportunity to build our own home, and avoid paying rent. I searched aerial photos for large green areas nearby, and discovered a forest just south of the University of Houston. I biked over to investigate, and discovered someone was already living there. I found a small hut built from tarps and mosquito nets, with clothes lines and buckets and coolers all around. Nobody was home, but I left a note and some beer expressing my interest in living nearby. When I returned a few days later, I found the empty beer cans and a reply to my note, indicating the squatter wouldn't mind our presence.

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[182] http://www.jpl.nasa.gov/news/news.php?release=2014-211

Photo Album[183]

Free Academy Experiment – *Aug 7, 2014*

Charged Cup [4 min video][184]

Moving into the Woods – *Sep 2, 2014*

It took a while to actually move into the woods. Our first attempt was a horrible failure. We were totally unprepared. We walked in after sunset and Melissa stepped on a fire ant pile. We weren't sure where we were going to camp and we were afraid of using flashlights for fear of detection, so we fumbled around in the dark for a while before finding a decent spot. We used a three-walled beach shelter as a tent, with a tarp to cover the open side, but that did nothing to prevent bugs and mosquitoes from attacking us throughout the night. The heat and humidity were miserable, so the next day we rented a room for $70/week in a dorm-style housing complex in the 5th ward that I lovingly referred to as “The Crack House”.

Over the next month, we made better preparations. We bought shelves, storage bins, mosquito nets, a trampoline to place our tent upon to keep us off the ground, and a lot more tarps. We rented a storage unit until we could sell more of our stuff. I worked like a dog assembling the trampoline in the forest, sweating like a pig, getting eaten alive by mosquitoes, but I learned the secret to quick trampoline assembly: alternate between leg

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183 http://imgur.com/a/E6D7H

184 https://youtu.be/deqozuTYzb8

pieces and circumference pieces to make a shape like the top of a rook chess piece, then fill in the gaps.

Why I Came Back – *Sep 21, 2014*

I've been living in the States for about 10 months now, and I feel I need to address the reasons for my return. When I set out in 2012, I had no intention of ever living here again, at least not for any extended period of time. I explained my reasons for expatriation in an open letter, "Why I'm Leaving America". I always assumed I would come back to visit friends and family, but never imagined I would stay this long. So why am I still here?

A new perspective can change everything. I see things different now. My ideas have evolved, and I've whittled away at my fears. When I left, I was afraid of the Leviathan.

"I'm not leaving because I can't live here with my principles, I'm leaving because you physically overpower me. I stand a much better chance fighting for my freedom outside your territory, and I don't believe it's cowardly to admit that." **– Why I'm Leaving America, July 20, 2012**

The problems with this statement are obvious to me now, but it took a long time to free my mind enough to see it. I was on the right path, and I'm proud I had the courage to stand up for my principles, but I hadn't taken the idea to its logical conclusion. I was still living with the citizen-slave mindset. I could enunciate the truth, but still couldn't fully grasp its implications.

"Your size and complexity hide a simple truth: that you don't physically exist. You are nothing more than a system of human interaction; not a thing in and of itself, but the result of a widespread pattern of behavior. You emerge from our beliefs, and the actions they compel us to take."

– Why I'm Leaving America, July 20, 2012

America doesn't physically overpower me because America only lives in the minds of people. I don't have to be afraid of the US government because the US government doesn't really exist. There is no State, and it has no territory. There are individual humans, and there is Earth.

Most Americans support the use of violence against those of us who disagree with their preferred social paradigm, so there's certainly cause for concern. But that's true all over the planet. We're members of a species that evolved in packs, so violent dominance hierarchies are prevalent. It's something to be aware of and something to be prepared for. But it's not something to cower away from. I will face kidnappers and thieves no matter where I go. I stand as good a chance defending myself here as anywhere else on Earth.

Once your mind is free, so is all the land. I can live wherever I want. Right now it's here, but I can't tell you how much longer this might last. There's still a lot I want to see and my time is running out.

I no longer feel complicit in American crimes because I live here, and I don't feel like I gave up on my freedom by returning. I've simply overcome more of my fears and developed a more liberated mind.

Free Academy Experiment – *Oct 2, 2014*

Vortex Tube [4 min video][185]

Playing around with a vortex tube. Got a cool/interesting experiment or idea you'd like to share? Head over to FreeAcad.com where we're building a free P2P university.

Free Academy Video Conversation – *Nov 12, 2014*

Erik Jue – What I Learned So Far [8 min video][186]

Occupying the Woods – *Nov 15, 2014*

Occupying the Woods [10 min video][187]

When I tried to present these ideas at the Jenner House for the first time, I completely froze on stage after one or two sentences. I couldn't think at all for about 10 seconds. I stared blankly at the audience. I meekly said "I'm sorry". I begged my brain for a word. Any word. Traci came to my rescue, prompted me to talk about the trampoline. I stumbled through another sentence or two before walking off stage. It was pretty embarrassing, but later I felt grateful to have gotten my worst possible performance out of the way in front of a small group of friends. My stage presence could only improve after that.

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[185] http://freeacad.com/2014/10/mf/vortex-tubes/

[186] http://freeacad.com/2014/11/mf/erik/

[187] http://freeacad.com/2014/11/mf/occupying-the-woods/

Free Academy Bed and Breakfast – *Nov 22, 2014*

We've got 4 extra places to sleep, come on out and spend a night in the urban forest! It's fun I promise! It's free (I suck at business) but we'll accept donations. Ropes, tarps, food, beer, buckets, money; whatever you got, we'll take it. Located 10 minutes from downtown Houston.

Photo Album[188]

On Environmentalism – *Nov 26, 2014*

On Environmentalism [3 min video][189]

Homelessness – *Nov 30, 2014*

I've only met a couple people in the last few months that really rubbed me the wrong way. The first one was a bike know-it-all who didn't like my 1970's girl's Schwinn. He couldn't understand that I just wanted a cheap bicycle to help me get around; he preferred to tell me all about my bike's problems before I *rode it home*, thus fulfilling its only function.

The second one was last night. Daario. Daario couldn't understand that I enjoy living in the woods.

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[188] http://imgur.com/a/O8sGz

[189] http://freeacad.com/2014/11/mf/on-environmentalism/

I met him when I walked outside at my friend Matt’s birthday party. Daario was lecturing my friend Kevin on political activism. He passionately believed that the only thing worse than doing nothing was an empty gesture. Which is a cool belief, I don’t like self-righteous activism either, but his attitude was belligerent. I thought I’d try to lighten the mood, which is where my forest story usually comes in handy. Not so with Daario.

The weather was beautiful last night, so I commented on it when their conversation lulled, trying to change the subject. Daario looked offended that I would try such a maneuver. I told him how I love weather like this since I live in the forest.

This is usually the fun part.

“What forest?”

“Oh, over by U of H. Across the street from MacGregor Park.”

“Seriously?”

“Yeah!! Here look at some of our pictures!”

(he looks. Doesn’t seem impressed.)

“So you’re homeless?”

“No, I built my own home! See- it’s on a trampoline. We’ve got a tent with mosquito netting, and tarps over that, and lots of blankets to keep us warm. We’re working on building rainwater collectors and a shower system.”

“See, this is why I’m a Socialist. I think everyone deserves housing.”

“Oh no, this is by choice. I love living with nature.”

I didn’t get a chance to explain my skepticism of government courts and the title system, how I think we needed to reclaim unused spaces, but I don’t think he wanted to hear it anyway. He didn’t seem to be too interested in new perspectives. When he left, he told me to “Do the work.”

But it got me thinking about that word, ‘homeless’. I’ve been thinking about it a lot lately, but I just can’t seem to understand it. “Houseless” I could understand, but how could I be homeless if I’m here on Earth’s surface? It’s not like I’m drifting through space, tumbling away from my planet. Gravity still works; my feet are grounded right here here on terra firma. Earth is my home.

Life in the Woods – *Dec 1, 2014*

An Experiment in Land-Use, Comfort and Security.

For the past two months, I've been living in the 34 acre woods south of the University of Houston with my girlfriend Melissa. It's been an interesting adventure, so I'd like to share some of my reasons for sleeping in the forest, a bit about my experience so far, and my ideas for the future.

My primary motivation for this project is exploring the fuzzy edges of property and ethics. We often imagine the problem of land-use as a clear-cut issue solved by titles and government courts, but I'm not convinced this paradigm handles every situation in the best way possible. My skepticism means nothing without action, however, so I moved into the woods to focus my attention on the issue. I wanted to see for myself what it was like to live outside the title system, to find some unused land and start using it without buying it or asking for permission, so that I might discover first-hand what my skepticism entails when put into practice in the real world. I also hope to share whatever I discover with the world, and inspire more people to think about the subject. We've designed our home as a thought-provoking, living art-installation to draw attention to the problem of ethical land-use, so that together we might explore and inhabit the frontiers with respect for human well-being.

I've been interested in the issue of property for some time. My last big inquiry into the ethics of land-use took place on an uninhabited island in the Bahamas. In 2012, and again in 2013, I sailed to Little Inagua with some of my best friends, to examine in person the idea of a "state of nature" as it applies to property.

I'm trying to help people to think outside the box, but to do that, first I have to get your attention. Sailing to a desert island seemed like a fun way to do that.

But the island works on several levels. Uninhabited islands are intuition pumps. They're aids to the imagination, tools to help us think. It's been in the philosopher's pocket for centuries: the old desert island scenario. People love to speculate about what would happen in a "state of nature”, tabula rasa, and often cite speculation as evidence for various claims. But no one ever runs the experiment! Well, I want to experience it first hand, if only for a short while with a few people.

Is this really a "state of nature" though? We're taking all the modern tools and technology we can afford, and enough food and water to last the trip. Not exactly an extreme survival situation (hopefully!)

But that forces us to examine the whole idea of a "state of nature", *that elusive foundation for our social contract. If this freshly inhabited island isn't a blank slate, do blank slates really exist? Because what we're doing is exactly how every society, large and small, in the history of humanity has ever been formed: a few people went to a new place (often already claimed by another group), carrying all the tools and supplies they could manage, and simply continued living their lives.*

So should we form a government? Should we claim property rights? Should we vote on these issues? How will we resolve disputes? How will we build infrastructure? What do we need to survive and thrive?

These are the sorts of questions I hope to investigate, and hopefully some of you will think about them too. **– Update from Puerto Plata**

It was obvious to me then that there could be nothing unethical about building a shelter and sleeping on an uninhabited island. If no one was there, I couldn't possibly cause anyone harm by staying for a while. Of course, we were breaking some laws. But ethics and law are two very different ball games, and I choose to play only the former. I don't care about laws, titles or customs, I care about doing what's right. I'm interested in figuring out a good set of ethics, behaving according to those principles, and sharing those ideas with others so we might debate them and spread the good ones.

The ethics of land-use seems a little fuzzier in the forest than on the uninhabited island. On Little Inagua, there was literally no one else on the entire piece of land. There was absolutely no one there to defend the property claim, so the claim was meaningless. In the forest, things are a little less clear. Someone else already lives there, and authoritarians pass by all the time. But after a lot of thought and investigation, I have come to the conclusion that my actions are morally defensible, and I'd like to make that case to you now.

Rational ethics must be grounded in human well-being. We must judge my actions not on the basis of law or customs, but harm. Have I hurt anyone? Have I made anyone's life worse? After living in the woods for over a month, I believe the answer is a resounding "no". I thoroughly explored the area before building a shelter, and I only found evidence of one other person with any apparent interest in the land. I haven't destroyed or removed anything of value. I haven't even crossed a barrier designed to keep intruders out. No one has told me to leave. No one even seems to know I'm living there.

There is nothing on this land to indicate I would harm someone by using it. This being the case, I believe the only reasonable conclusion we can reach is that my life in the woods is morally permissible.

Being ethical doesn't make it wise, however. Or fun, or comfortable, or safe. And at first glance, it's difficult to imagine someone who lives in the woods feeling happy, comfortable or safe. But I am having fun, I do sleep comfortably, and I truly believe this risk is manageable and worthwhile.

Why is this fun to me? I get to live in nature and solve my own problems while freeing myself from the shackles of rent/mortgage/property tax slavery! This is all I ever wanted.

When I was little and people asked me what I wanted to be when I grew up, I would tell them I wanted to live under a bridge and eat berries. I was never too fond of material comforts; I fantasized about living in the wild and roughing it. I wanted to be self-sufficient. I wanted to commune with nature like our ancestors did. I wanted to be the master of my own schedule, and I wanted to spend my time outside.

Building a comfortable home in the forest using only cheap or free materials is a really fun game to me. I get to see my ideas spring to life, I get to design directly in place and continually decide how to make my home more functional and beautiful. This game comes with its own set of rules and objectives, thrust upon us by the nature of the project.

Secrecy was a primary concern. Authoritarians can't be expected to abide by rational ethics, so to avoid arrest we moved our belongings into the woods at night and used several different secluded trails. So far, it seems like nobody has noticed our movements.

The next big challenge was mosquitoes. Nasty little suckers, if there was anything that almost made me quit it was getting attacked by those bastards during every phase of construction. Luckily, humanity has already invented some great defense against this threat, so we applied bug spray and slept in a tent until we could sew together a huge mosquito net to drape over our sleeping quarters. That, and the colder weather, has all but eliminated the problem.

Weather is another issue, though. Hot, cold, rain and mud, we needed a way to protect ourselves from these threats. To keep us off the ground and out of the mud, I assembled a trampoline in a clearing deep in the woods. I had to carry it piece by piece from the edge of the forest where we dropped it at night, but trampolines are incredible inventions of our modern era. The individual components are light, they assemble quickly, they're easy to clean and last forever, plus there's a lot of used ones for sale on Craigslist at very reasonable prices.

The trampoline worked well to shed heat in the summer, but over the course of this experiment the real problem has changed from sweating to shivering. Luckily, insulation and body heat have been enough to solve this problem. Layers of clothes and blankets can do wonders to keep a body warm.

With our trampoline, mosquito nets, tarps, tents and blankets, Melissa and I have slept pretty comfortably for 60 days so far. And now that our basic needs have been met, we have plenty of time to address new concerns as they arise.

The other major problem we face is security. How do we protect ourselves and our stuff without walls? This was certainly the biggest unknown going into the woods, but I'd like to take this opportunity to discuss the difference between unknown risks and high risks.

We humans have an innate cognitive bias towards confusing these concepts. We naturally have a fear of the unknown, and we tend to overestimate the dangers of situations we aren't familiar with. This isn't irrational. There's an obvious evolutionary benefit to avoiding unknowns, cuz unknowns can kill you. Unknowns can also help you, which explains curiosity and courage, but balancing these forces is a difficult task. In general fear comes out on top, and we tend to assume the risks we don't understand are higher than they actually are.

To combat this bias, I like to employ the "baby step" approach. I started small, keeping in mind I knew little about the situation and I was on the lookout for threats but willing to take steps into the unknown. First I walked around the forest, then I followed a trail through it, then cut through some of the thick brush, then we camped one night, then we stored some cheap belongings in the brush, then more exploration, construction, more caching, assembling the trampoline and tent and moving it 3 times until we were happy with our spot. Now we sleep there regularly, but we could have aborted at any stage and moved to a different forest if this one proved too troublesome.

Throughout this escalation process, I continued to evaluate possible risks and update my threat-models. I continually thought about who might hurt us, why, and how they might act. In our situation, the threats I imagine are:

1) Authoritarians
2) Neighbor
3) Explorers
4) Homeless
5) Unknowns

It's ironic that the presumed protectors of our society are generally our greatest threat, but I think that's the case for us in the woods, too. My greatest fear is being kidnapped by some authoritarian in a cop costume and being held captive. These people struggle with rational ethics, so they can't be expected to act reasonably. Even though we clearly haven't harmed anyone, authoritarians might forcibly remove us from this land.

Luckily, in our situation the law happens to coincide with what's right. According to Texas statutes, an individual only commits criminal trespassing if:

> *someone who has received notice that entry is prohibited ignores the clear intent of the property owner and enters anyway. Refusing to leave someone's property after being told to depart also constitutes criminal trespassing. Under the law, there are five basic ways to provide legal notice concerning trespassing:*
>
> *1. Written or oral communication by the property owner or representative*
> *2. An enclosure that is obviously intended to restrict access or enclose livestock*
> *3. A visible sign prohibiting entrance to a building or property*
> *4. Visible purple paint marks of the required size and placement on posts or trees*
> *5. A visible crop that will be harvested for human consumption*

Since none of these criteria have been met in our forest, we can legally hang out until we receive notice to leave!

Our neighbor is another risk for our life in the woods. Doug lives on the south side of our forest. He clearly prefers his own company. It looks like he's lived there for some time and he intends to stay a while longer. I left him a note and some beer once, and he wrote back implying he didn't mind me living in the woods, too. I believe our neighbor is a low-risk threat.

The next biggest threat I've imagined is someone exploring, like I did, most likely some kids. But due to the location of the woods, and after spending a great deal of time there, it appears this threat is low. I haven't found any evidence of someone discovering our camp or messing with our stuff, besides Doug. Melissa even left her iPhone sitting on our trampoline for 3 days, by accident, and it was still there when we returned. Even if an explorer did find our camp, I imagine they'd either leave it alone or steal only the lightest and most valuable of our possessions (of which we have few).

Homeless people are another possibility, but I think the mosquitoes keep them out for the most part during the summer. There are a few trash sites in the forest that seem to imply the odd camper, but it doesn't look like there are any other active forest users besides me, Melissa and our neighbor, Doug.

The last possibility is unknown unknowns, people who enter the forest for reasons I can't imagine. As such, the risk is impossible to evaluate. I have no threat-model since I can't imagine their motivations, but the evidence seems to be mounting that this tail risk is low.

Every day, we learn a little bit more about the risks we face, and so far the evidence has given me confidence that we've chosen a safe place to sleep.

As much as I've enjoyed it, I don't intend to live in the woods forever. I don't intend to live anywhere forever. Every home I inhabit is a transitional solution.

I plan to sleep in the woods most nights through the end of 2014 while I prepare for my next adventure. Melissa and I intend to build a raft out of trash and head South. I learned a lot on my last sailboat, and I'm convinced they're one of the cheapest and most enjoyable ways to travel. I want a much smaller boat this time, however. One that's small enough to drag onto a beach, so that I can sleep on solid ground without worrying about my anchor dragging. We want to sail close to shore during good weather only, hopping from beach to beach as we make our way to Central America. We'd love to form a fleet of small sailboats with free thinking adventurers, let me know if you're interested in migrating. I'm looking at boats in the $500 range so this will definitely be a voyage on a shoe-string, but that tends to make things more interesting.

I'd love to hear some of your questions, comments or concerns. Do you think what we're doing is ethical? Can you imagine any other kinds of threats we should prepare for? What luxuries would you miss the most in the woods? This is an experiment, and the most important part of any experiment is sharing the results and receiving feedback.

Occupy the Woods Videos – *Winter 2014*

Two Month Update [6 min][190]

A General Form of Protest [4 min][191]

New Years Day Party [2 min][192]

Three Month Update [3 min][193]

Ants – *Jan 22, 2015*

I played a game of throwing-rotten-oranges-at-an-anthill golf yesterday. Then I watched the ants for a while, when it dawned on me that each individual ant was acting totally selfishly. Nobody was doing anything for the good of the colony. I couldn't believe it!

I started yelling at them: "Don't you care about your city? Don't you care about your queen?"

But every ant kept marching to the beat of their own drum. No matter how I shouted, I couldn't get a single ant to act out of anything but rational self-interest. Those greedy bastards just kept crawling around doing whatever they believed would make them feel best in the short-term. Addicts to their own neuronic highs.

I started to pity the ants. What meaningless lives, lived solely in pursuit of personal gratification. They couldn’t seem to put the needs of the colony ahead of their own masturbatory pleasures.

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[190] http://freeacad.com/2014/12/mf/occupy-the-woods-2-month-update/

[191] http://freeacad.com/2014/12/mf/general-form-of-protest/

[192] http://freeacad.com/2014/12/mf/newyear/

[193] http://freeacad.com/2015/01/mf/3month/

Even the apparent altruism was fraudulent. The workers were only distributing food because it made them feel good to share. The soldiers were only defending the mound because it made them feel good to defend. The Queen only cared about her Queen desires and the larvae only cared about their larvae desires and the pupae only cared about their pupae desires. The ants were only doing whatever felt good and didn’t do anything for anyone else unless it made them feel good to do it.

The selfish bastards! It’s a wonder the whole society doesn’t collapse. They sure are lucky to have evolved such compatible desires, otherwise there’s no way this apparent high-level social structure could have emerged. If the ants enjoyed other things, things might look very different.

What if the ants preferred autonomy? The little guys probably wouldn’t do too well on their own. Seems like their strength lies in their numbers. I’m sure they wouldn’t have lasted this long as a species if they worked alone or in small groups.

Oh. Wait a second. There probably WERE ants who preferred autonomy. There were probably ants with all kinds of “strange” desires, but they became rarer and rarer over time since they didn’t pass on their genes as often. Maybe their desires only seem “strange” to us because they are rare. Maybe we’re measuring normalcy by the yardstick of population, so the behavior that seems “normal” is simply that which has become most commonplace.

I like to imagine the peculiar ants. The black sheep ants. The lone wolf ants. Did they dream of a different social order? Did they make the other ants uncomfortable? Did they make them question their own desires? Were they exiled for being different?

Or maybe they left of their own accord. Maybe they wandered off into the frontier to build new homes, to live out their few remaining days as free ants, slave to no one, hunting and gathering outside the established order with a small band of sisters.

Maybe we don’t see the colonies of dreamers because they don’t grow and expand and invade and conquer.

Maybe we don’t see the colonies of dreamers because they don’t shout out their existence. They whisper.

Maybe we don't see their villages because they don't build great mounds to announce their presence. They prefer small hidden shelters. And we never find their trails because they don't follow one another down the beaten path. They slip quietly through the underbrush.

Maybe we don't see the colonies of dreamers because we're not looking hard enough. Maybe they're hiding in plain sight, but our preconceptions render them invisible. Maybe there are free ants all around us and we just don't notice.

Maybe we see what we want to see when we look at the ants.

Deborah Gordon: What ants teach us [14 min video][194]

Occupy the Woods – 4 Month Update – *Feb 16, 2015*

4 Month Update [4.5 min video][195]

Gravy – *Feb 24, 2015*

I was thinking about my mortality the other day when I realized: whatever time I have left is gravy.

I've lived over 25 years, with 3 years of solid freedom. I've sailed over 4,000 miles, illegally immigrated into a few countries, built a couple autonomous zones, interacted with lots of badass people, indulged in many hot showers and lots of great food. I've overcome many of my fears. I've learned how to be present in the present moment. I've been in love, and I've been loved. I've seen amazing, radical changes in human society and I can see hints of revolutions to come. I've had lots of time to think and dream and explore and discover, more than any man could ask for. I can die happy.

I'm not writing this to brag, but to share a deeply rewarding perspective. I don't fear death because I've already lived. I won't go rushing to the grave, but I won't waste my time avoiding it either. Before long, I'll be gone. I'm going to lose consciousness forever soon. But until then, I'm gonna ride this gravy train till it falls off the tracks.

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[194] https://youtu.be/aL00a3sfnYM

[195] http://freeacad.com/2015/02/mf/4monthupdate/

Jenner Open Mic Poetry Night – *Feb 18, 2015*

Photo of my talk by Ronald L. Jones[196]

Yesterday I gave a little talk at the Jenner House Open Mic Night about my experience in the woods so far. The Jenner is a super cool community that I've been really lucky to get involved with, and once a month they open the floor for anyone to do any kind of performance they want. I've seen some amazing people do some really cool things: lots of great poetry, musical performances, guided meditation, science education and more. The Jenner has given me the opportunity and inspiration to work on my stage fright in front of a close-knit group of friends, and for that I'm truly grateful. Look up the Jenner on Facebook if you're interested in coming out next month, I'm going to be demonstrating how to make thermite!

Thermite Demo [2 min video][197]

I thought I ought to share my talk with the wider web just in case anyone is interested:

I'm calling this talk "Courage Propaganda", but I want to use the original Latin form of the word 'propaganda' meaning "to spread or to propagate", without any implication of misinformation.

2500 hundred years ago, a Greek named Socrates told us that "The unexamined life is not worth living". Socrates believed self-scrutiny and consistency were crucial for living virtuously. Through the power of written language, his courage and integrity have resonated with thinkers through the ages. I'm personally inspired by his appreciation of analysis and adherence to principle. I've learned to love to investigate WHY I do things, and make sure the reasons align with my beliefs. But this task often proves harder than we might imagine. Paradoxically, sometimes we can't fully understand why we started something until we complete it. Sometimes we can't know why we set out on a journey until we return to our point of departure. We must come full circle before we can appreciate the start of a curved line.

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[196] http://i.imgur.com/x25Wjeh.jpg

[197] http://freeacad.com/2015/03/mf/thermite-demo/

I left America on my sailboat in 2012 to call attention to the government's use of coercion. Over the course of my sailboat journey I came to realize that the government I was fighting didn't actually exist. I came to see that the evil that manifests itself as government actually lives in the minds of individual citizens. It's the fear in each of us that allows coercive organizations to exist. Coercion is the Universe's equal and opposite reaction to our choice to hold fear in our hearts. It's fear itself that we must attack if we are to free ourselves from coercion.

A year and a half after I left, I returned to America with this new understanding, but I was at a bit of a loss about how to proceed. Before I left, my goal was to contribute to the collapse of the government and the banking cartel. The enemy was obvious. But once I understood that these organizations are mere figments of my imagination, I wasn't sure how to oppose them. How do you fight a ghost? How do you undermine an illusion? It took me some time to sort out a solution, but over the past few months, a path forward has crystallized before me.

We can attack fear directly through acts of courage, because courage is contagious. Ripples of bravery spread from every splash of valor, and these waves can propagate over long stretches of distance and time. Socrates continues to inspire me today; his unflinching integrity even in the face of execution still reverberates through the cosmos. A bit of his courage lives on in me.

In the same way, I've caught some of the courage released by all of you. Every time one of you gets on stage with a touch of nerves, I can feel my own stage fright whittling away. When I see you all overcoming your fears, I feel my own fears dissipate a little. Bravery bounces off these walls and enters the hearts of those willing to catch it.

Which brings me back to the title of this talk: Courage Propaganda. My art project in the woods is more than just a way of saving money and living closer to nature. Life in the woods is a demonstration of courage, with the hopes that sparks from my flame might spread to others. I'm trying to propagate the idea of living free, by living as absurdly free as I can manage. My idea is to fight fear by building Temporary Autonomous Zones: short-lived enclaves of freedom where we can do whatever the fuck we want and laugh in the face of coercion. So what if governments control vast stretches of the Earth? There's still lots of unused land available and they don't have the manpower to look everywhere at once. I found my own little spot right here in Houston where nobody controls me, where I don't have to pay anyone to not-kick me out; a land without rulers- my own little anarchic utopia. My plan is to continue building Temporary Autonomous Zones and propagating freedom wherever I go.

I'll end with a tiny poem:

You can be Free anywhere,
with any responsibility you prefer to bear;
you have no excuse,
to stay in your noose,
save Fear.

Occupy the Woods – Archeology *– Feb 24, 2014*

Archeology [2 min video][198]

First Free Academy Art Contest *– Mar 13, 2014*

In early March, I announced the first Free Academy Art Contest, with some unique rules and incentives to experiment with new styles of learning and sharing. The prompt was to submit a work of art (any medium) expressing the study of a "freer" human.

It was my attempt at hitting a few birds with one stone: First, I wanted to experiment with a crowd-sourced style of funding research, education and dissemenation. Second, I wanted to inspire people to seek out freedom experts and learn from them. Third, I wanted to find out what freer people are doing so I can adopt some of their successful patterns.

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[198] http://freeacad.com/2015/02/mf/archaeology/

To make the game a little more fun, I started a donation-based prize pool to be awarded to 1st, 2nd and 3rd place winners (60%, 30%, 10% of the prize respectively).

Anyone who donated received a vote, but all donation sizes received 1 ballot, and we used Instant Runoff Voting to prevent competition among a few top entries from splitting the vote.

I put $20 of my money in the pot to get things started, and we ended up with $114 in prize pool, which meant $68.40 for first, $34.20 for second, and $11.40 for third place. Not bad!

Due dates and judgment are always optional at the Free Academy, but we ended up with 6 entries before the New Moon deadline. The winner was Tyler Olsson with a song about Lao Tzu. Second place was Benjamin Gilliam with a collage about Bruce Lee, and I got third place with my essay on Che Guevara.

Che – *Apr 18, 2015*

It was hard to pick just one person as an example of a freer person, but I decided to go with Che Guevara for a number of reasons. I'm not selecting him because I agree with all of his beliefs, or because I support all of his actions. I disagree with many of his conclusions. But I'm inspired by the way he freed himself and others. I admire his courage to let himself be changed by the world, and his ambitions to change the world around him.

Ernesto Guevara was born in 1928 to a fairly wealthy family in Argentina. He grew up with privilege, enriched by his family's extensive library and his college experience. He was an avid reader, interested in a wide range of topics from politics to science, but decided to pursue a medical degree at the University of Buenos Aires. Adventure called to him, however, and in 1950 he answered with a 2800 mile solo motorcycle trip through Northern Argentina. Not quite satisfied, he set out again in 1951 at the age of 23 with his friend Alberto Granado on a 9 month journey around South America.

They set off on a motorcycle, but ditched it when it broke down along the way. They improvised other forms of travel; walking, hitch-hiking, traveling by boat and airplane, as well as floating down the Amazon on a homemade raft.

It was this journey that introduced him intimately to humanity. He began to see the world from a new perspective. He crossed border after imaginary border and saw that these national divisions were illusions. He developed a sense of oneness with his fellow Latin Americans. At the same time, he saw intense poverty, sickness and suffering for the first time. And at the root of this suffering, he saw the United State's imperialism.

Map of Che's travels[199]

Che returned to Argentina a changed man, more conscious of himself and the world, and he was intent on doing something. In June 1953 he graduated from medical school and within a few weeks he set out another adventure. This time he traveled across Bolivia, Peru, Ecuador, Panama, Costa Rica, Nicaragua, Honduras and El Salvador before reaching Guatemala. Here he stayed for a while, becoming intensely interested in the politics of the region, and the affects of imperialism on the developing economy. He was inspired by the democratically elected president's land reform program, where unused portions of large land holdings were expropriated and redistributed to landless peasants.

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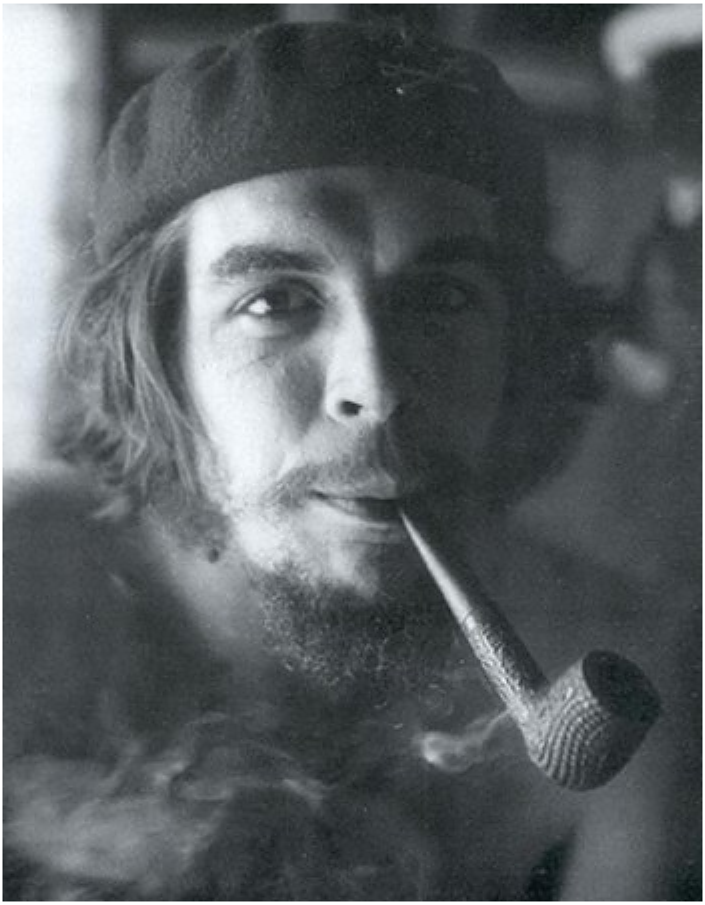
[199] http://i.imgur.com/XH3MjHR.jpg

There, in Guatemala, Che began to make contacts with political activists that would carry him deeper down the revolutionary rabbit hole. He met his future wife, a Peruvian with connections to left-leaning political organizations, and made contact with Cuban exiles associated with Fidel Castro. It was there in Guatemala where Che witnessed the CIA overthrow a democratically-elected, popularly-supported government and install a puppet dictator. Che was eager to fight back against imperialist aggression, and the next year he got his chance in Mexico.

Che met Fidel in June of 1955. Che was 27 years old. Fidel was 29. A year later, these kids invaded Cuba. Two years later, they had overthrown the government.

I'd like to take this opportunity to emphasize the audacity of their plan. Che, Fidel, and 80 volunteers boarded a leaky old boat named Granma, sailed into Cuba with only their wits and the little weapons and ammo they could afford. Their goal was to dismantle the US backed dictatorship and redistribute land acquired by large US business interests. They were guided by communist ideology and a firm indignation towards the exploitation of workers. Whatever we might think of their particular political conclusions, we must admit these kids had balls. The plan must have seemed ridiculous to anyone at the time, but these young men didn't let anyone tell them they couldn't do it. We must never underestimate the power of a small group of dedicated people to change the world.



After landing in the wrong place in Cuba, the small band of revolutionaries was attacked by Batista’s regime. Only 22 of the original eighty survived and regrouped. They moved to the mountains for cover, and began to draw support from the surrounding regions. They trained locals in guerrilla warfare, tactics they were just learning themselves, and began strategic attacks on vulnerable state targets.

Che quickly proved himself as a leader and a fighter. He had great instincts for war and recognized the strengths and weaknesses of his guerrilla warriors. Between this and the widespread disapproval of the US backed dictatorship, the rebels gained strength and by the end of 1958 they had taken Havana.

Che stuck around for a while to help with the new government, but quickly became disillusioned with his new role. During his time as a head of state, he served to institute land reform programs like those he had witnessed in Guatemala. He emphasized literacy programs, served as an international diplomat, speaking before the UN and traveling across the world to meet other powerful figures to discuss global revolution. He was appointed as an instructor for Cuba’s armed forces, and even became president of the national bank. Although he now held positions of power, he made his disdain for formality and the bourgeois evident. He generally wore his army uniform and boots to meetings, and signed the Cuban banknotes with his nickname.

Bank Note with “Che” signature[200]

After winning the revolution, at the age of 33 he wrote a treatise on Guerrilla Warfare tactics.

Guerrilla Warfare By Ernesto "Che" Guevara. Written in 1961[201]

He then began looking for a new war to fight. Che wasn’t as interested in the Cuban Revolution as the Global Revolution. He sought to end imperialism, end the exploitation of the proletariat, and narrow the gap between rich and poor. He traveled to the Congo and later Bolivia to try to initiate revolutions, and this ultimately lead to his death in 1967 at the age of 39.

Che lived unencumbered by social chains. He saw himself as a member of the global resistance, a true revolutionary. He freed himself from fear and pushed himself to help humanity as best he could, regardless of personal risks. I believe we can all learn something from Che about living a more free life.

On the Convexity of Cheap Things – *May 19, 2015*

I might have a hard time explaining this idea. It’s based heavily on Nassim Taleb’s analysis of the effects of variation and how we can utilize 2nd-order data to make better decisions than 1st-order data allows.

What does that mean? Let’s use a concrete example, because purely abstract math isn’t really that fun for me.

So for our concrete example, let’s say I want to dig a hole (to pour the concrete in). How much money should I spend on a shovel? Let’s start with a few assumptions: First, let’s say we care a whole lot about maximizing the efficiency of our money. Let’s also assume for any particular model of shovel I might choose, there is a variable life expectancy. And let's assume there is a correlation between the price of the shovel, and how long it will last. Let's also assume the shovels will be delivered to our door with free shipping so we don't worry about the cost of time. I'm just trying to focus our attention on one particular part of a shovel purchase for the sake of explaining this idea about convexity.

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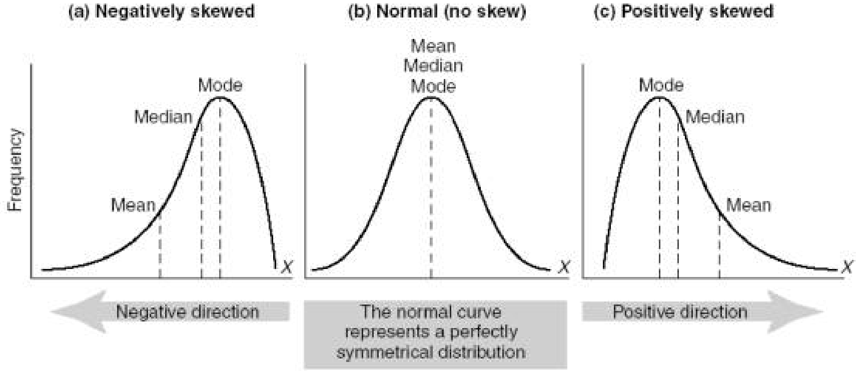
[200] http://i.imgur.com/IB4AJC8.jpg

[201] https://ia802704.us.archive.org/17/items/GuerrillaWarfare_856/guwar.pdf



One thing to note is that the variable life expectancy of an individual shovel will NOT have a Normal (Gaussian) distribution. This is NOT a situation with a symmetric standard deviation. The graph doesn't look exactly like a Bell Curve, because the left-tail has a finite minimum and the right-tail could theoretically go off to infinity. The chart is stretched out a bit on the right side, something Taleb calls a "fat right-tail", aka "positive skew".

That's a mathy way of saying: we KNOW we can't break our shovel before the moment we purchase it, but there isn't a set maximum amount of time after which the shovel automatically breaks. That fact serves to skew the chart so that it has a fat right-tail.

Regardless of which shovel we pick (and how much we pay for it), we can assume the life-expectancy will be skewed in this way. A more-expensive shovel will likely last a lot longer than a less-expensive shovel, but the variations within a single model will tend to have a finite left-tail and infinite right-tail, creating a positive skew.

Why does that matter? We can take advantage of this fact to help us make better decisions even from a place of almost total ignorance about shovels and our own desires. We'll never see these graphs in reality. No shovel manufacturer releases this kind of data (that I know of). But by knowing the life expectancy has this type of convexity, we can use 2nd-order analysis to improve our decision making.

Let’s go back to the original question: how much should we pay for our shovel?

The fun answer is $0. Ask a friend if you can borrow hers. That might sound like a silly escape from the question, but I think there’s something deep there. If we know nothing about how long we might need a shovel, or the price/life expectancy ratio of any new shovel, then we can take advantage of a free trial period that almost anyone would grant us. You might start digging and realize you’d rather hire this job out. Or decide you don’t even want a hole with concrete in it after all. Or finish really fast and never need your own shovel. Or get hit by a bus, or lose an arm, or any number of unforeseeable circumstances that would make shovel ownership pointless.

But let’s say we’re really sure we’ll need our own shovel on-hand for the next 10 years. Now which kind should we buy?

Here’s where I think it makes sense to take advantage of the convexity of cheap things. The key is the fat right-tail. I’ll make up some numbers to help with this example, but you should understand they are made up and only serve to elucidate this point about 2nd-order effects.

Let’s say the cheapest shovel is $5 and has a median life expectancy of 1 year. And let’s say the most expensive shovel is $50 and has a median life expectancy of 10 years. Which one should we buy?

If these shovels had normally distributed life expectancies then we’d expect to spend $50 either way over the next 10 years. If these were Normal distributions, it wouldn’t matter. You could repeat the experiment over and over and the two paths would converge over time. But these aren’t Normal distributions, the fat right-tail can help us do better than the median on average by buying the cheaper shovel.

To see why this is the case, imagine buying the expensive shovel for 100 hypothetical experiments. 50 of them won’t make it 10 years. They’ll lasts somewhere between 0 and 10 years. But of the 50 that do make it, some will last much longer than 10 years. Perhaps some shovels will last 20 or 30 years in the extreme outlier cases. This is the fat right-tail, where in rare circumstances things can last much longer than the median life span.

But why does that mean we should buy the cheap shovel? Because we get more chances to find ourselves in the fat right-tail. Perhaps we buy 1 cheap shovel and it only lasts 6 months. Then we buy another and it last 1.5 years. Then another that only lasts 8 months. But then our fourth cheap shovel lasts 8 years. We lucked out and got one of those extreme outliers in the fat right-tail, and that purchase made our entire 10-year strategy pay off for just $20. By exposing ourselves to the convexity of extreme outliers, we saved a lot of money and got to dig a lot of holes.

I think this perspective is useful in lots of places in life. I'd highly recommend Nassim Taleb's book Antifragile (or just watching some YouTube videos or podcasts about it). This kind of analysis is tricky, it's a bit unintuitive, but it's a really deep idea that touches many aspects of real life decision making.

How Living in the Woods Became Normal – *May 23, 2015*

Normal [2 min video][202]

Update on the TAZ experiment – *Jun 2, 2015*

Here's the speech I wrote for the Jenner open mic night in June. It went a little different in person, but this is what I was reading from:

2 months running in Austin, 8 months total counting my time in Houston, and I have yet to be discovered by authoritarians. Just a few close calls, live with some small amount of paranoia, but also helps with overcoming fear by facing it head on and learning to recognize legitimate threats vs imaginary ones. And figuring out how to work through new potential threats before you know which category to put them in.

Best tactic seems to be crouch and wait and gather more data. One time going into woods in Austin, cutting across school, I saw a cop drive up outside the fence. I crouched and waited, made sure he didn't see me, then continued into the woods. Our very first night in the Austin Autonomous Zone we got a similar scare sitting at HQ (our campfire spot). Jared and I ran off into the woods, crouched and waited, didn't see or hear anything but went to the other side of the forest for the night anyway.

For the most part, I feel very safe in the woods. It's only the transition, entering and exiting, when I worry about getting caught, but I've learned to observe the situation before crossing the threshold to avoid trouble. Once I'm on the street, I blend back in with the rest of civilization.

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[202] http://freeacad.com/2015/05/mf/normal/

The Houston Hut is still there in the forest across from MacGregor Park, no problem with the flood, nothing's been taken even after leaving it abandoned for 2 months, although more critters have made it their home in my absence.

I continue to meet other people living off the grid. I found another pair, James and Jimbo, living in an extensive forest habitat across the street from my TAZ. They've been living out there 2.5 years now and have built the place up by slowly accumulating free things they find. They've got a fence, walk in closet, and a mattress in a tent with a tarp roof. In their sitting area is a table and chairs, coolers, lanterns and fans.

I've been getting more involved with the on-grid liberty movement too. There's this awesome bookstore in Austin called Brave New Books. It's this tiny place built in the basement below a Chase bank on Guadalupe near MLK. It reminds me a lot of the Jenner. They have community events and book releases and dinner parties and they're all into gardening and stuff, but with a more explicit libertarian/anarchist ethos. The first event I went to, Derek Broze was talking about Agorism and wearing this shirt that said "Read Konkin", so I bought Konkin's Agorist Primer and the New Libertarian Manifesto with silver coins, which they accept at Brave New Books, and I really like how Konkin expressed his ideas on freedom.

Talk about Agorism. Open market place. No coercion. Protection through insurance. Counter economics.

Konkin reminds me a lot of Hakim Bey with TAZ. And Robert Anton Wilson. The part that really appeals to me in all of these perspectives is the realization that we can be free RIGHT NOW, and the understanding that the power relations we experience depend on our own internal narrative. Robert Anton Wilson has a great quote: "When you define the power elite as somebody else, I regard that as a loser script. I define the power elite as myself and my friends." We are the people who decide what happens, you guys. We are the ones running our show. We're calling the shots.

I had a tweet along the same lines a few weeks ago. "I live in Anarchy because I recognize no rulers. There are individuals in this world who threaten me occasionally, but they're not my rulers". Of course I acquiesce to threats sometimes. The key realization is that I don't have to. Even if someone puts a gun to my head, the ball is still completely in my court how I choose to act. I have the power to say 'no', even if it means my death. Sometimes it's smart to live to fight another day, though.

I got pulled over by the cops for running a red light on my bike in Austin. It was so infuriating, I almost ran from them but I pussied out. In hindsight I should have, cuz the bike was only $50 and the ticket was $219, and if I would have tossed the bike and taken off on foot down the creek I'm pretty sure I would have gotten away.

But I used the opportunity to tell this pretty cute cop lady that she was part of a cartel working with the city to rob people for profit. She was trying to tell me that they pulled me over for my own safety. Can you believe that? They were stealing $219 dollars from me ***for my safety***. I wish there was some organization I could hire to protect me from muggers in uniforms like her. For the most part I was just smiling and being polite, but I couldn't hold back after she said that.

Anyway… the beauty of the immediate, individualistic, improvisational type of anarchy is we don't have to win a revolution to enjoy a free life. We don't have to wait for the majority to demand freedom. We don't even have to wait for a minority. ***I*** can take steps towards liberty at my own pace, regardless of what others do.

To me, anarchy simply means no rulers. It's a proclamation, not an observation. I don't look out into the world to find no-rulers, I look within. It's a personal, internal, transient shift in perspective. Anarchy is a form of meditation. I think a lot of people use the word anarchy to mean no government, or even worse, chaos, but I like to make the distinction because the first type of anarchy is self-empowering, the second is self-defeating, and the third is simply a misunderstanding of how order emerges in society.

To see how the second version of anarchy is self defeating, let's try to define the word "government". According to Google, it's "the governing body of a nation, state, or community.". Ok well what does 'governing body' mean? You can follow the web of word associations online to discover that the word government is closely related to the words "administration" "state" "policy" "control" "laws" "official" and more, but you never really discover what makes a government different than other sorts of human relationships. For example, in a family, the parents often act as the governing body, they control the policy of the tiny community, but are they a government? What do you guys think? What about the mafia? What about the board of directors for a corporation? When we try to define the word government, we're forced to look out into the world to see what these organizations are doing that set them apart. It seems like the real essential elements are the taxation and the court monopoly. But no matter how we define government, if we look for one, we will find one.

I found one definition of government I especially disliked on vocabulary.com:

"Your government is the system of people, laws, and officials that define and control the country that you live in."

Reading that felt like a dagger in my heart. "Your government". As if I automatically have one. Although I think there is some truth to that, especially in the current environment with the amount of coercion used around the world. No matter where you live, someone is probably gonna try to tax you and use courts to "prove" you owed them money.

To me, a government is simply the largest organized crime syndicate in a region. So we can see how government would be impossible to eliminate with my definition, because once you dismantle the largest cartel, the second largest will now be the largest, so you still have a government. When you look around the world with the second type of anarchy in mind, the goal seems impossible. Every time you slice off the head of a Hydra, two more grow back.

The first type of anarchy, the kind where you proclaim "I have no rulers!" is self-empowering because it recognizes we don't have to fight the Hydra. There's plenty of unused land to live on, plenty of seeds to plant and solar panels available for electricity, rainwater falls out of the sky for free, and there are badass people willing to trade with us without using coercion for the stuff we can't produce on our own. We don't have to kill the Hydra to live free. That's a self-defeating narrative. If you define anarchy externally, you get sucked into a fruitless fight and waste your time and energy replacing one head with another. I believe there is a better way, a self-empowering path to freedom, and that begins with the realization that ***I*** have the power to simply walk away.

I’d love to show you guys my setup in the woods. We’re throwing an off-grid camp-out weekend-long festival June 26-28, Friday through Saturday up in Austin called “Trees ‘N Us” (pronounced “treasonous”). I’d love to see some of your beautiful faces out there. You don’t have to come the entire time but you’re all more than welcome to check out the baby village, see the garden, experience that tinge of fear when you cross the threshold, jump on the trampoline, grill, drink and be merry. Get in touch with me early if you’re planning on coming out so we can make sure to have enough tents and arrange parking and all that stuff.

Becoming One with Nature *– Jun 27, 2015*

Becoming One with Nature [2 min video][203]

Moments of Freedom *– Jul 3, 2015*

Presented at Upspoken! Open Mic at Brave New Books:

I’d like to talk about enjoying brief moments of anarchy, and how a slight shift in perspective can help us live a freer life.

When we examine the world today, things can look pretty depressing. There are 200 nation-states out there, billions of people involved in the business of coercing others, and they’ve figured out how to use technology to kill us from afar and to watch our every move. Understanding our situation can rightfully leave us in fear, and I think this awareness weighs heavily on a lot of us free folk. But there is a way out of this negative mindset, and we don’t even have to overthrow the state to achieve it. All we have to do is learn how to control our attention.

You see, our attention guides our perception of reality. What we focus on determines our experience. When we focus our attention on coercion, we see coercion. I think this is the double-edged sword of our awareness of aggression. We need to be able to recognize evil in order to fight it, but now that I know how to look for it, I do look for it, and I see it all over the place. But seeing coercion all the time isn’t a fun way to live. And it’s not representative of the Real World either. I have to be aware of my selection bias, and counteract it by focusing my attention on what’s actually happening around me.

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[203] http://freeacad.com/2015/06/mf/one

When I step back and examine my immediate surroundings, very rarely do I witness any aggression. Coercion is an outlier. Of course, the State’s aggression is systemic and the threat is always there, but I believe we need to learn to deal with the threats when they are present and forget the State as much as possible in between. We must learn to see that the government only exists in Temporary Coercive Zones, little bubbles of statism that surround cops and judges and other government employees, but for the most part the world is free and open.

I believe anarchy is a form of meditation. It’s not a type of society, or a place on Earth, and it never lasts more than a moment. Anarchy exists only in the present, never stretching into the 4th dimension. Moments of anarchy are like singular points of light, little supernovas of freedom that only last a second. Moments of anarchy are beautiful to behold, but there’s no point trying to sustain them, we must learn to simply enjoy the ride.

Now that I know how to look for them, I see people riding moments of anarchy all over the place. And it’s contagious. Kids and dogs especially know the joy of moments of freedom, and it’s hard not to feel freer myself when I watch a dog playing or a child learning. But somehow, many of the brightest humans, those most aware of the suffering around them, have forgotten how to live in the moment. By focusing on the past, future, and distant suffering of others, we inflict suffering on ourselves. This suffering is also contagious. To free ourselves and those around us, we must practice anarchy by immersing ourselves in moments of freedom. With this perspective I see a free world, and a bright future.

FreedomFest – *Jul 7, 2013*

I was lucky enough to receive a scholarship to attend FreedomFest in Las Vegas with Students for Liberty, and I flew into McCarran International Airport the night before the convention started. Students for Liberty provided accommodations for the duration of the festival, but I couldn't check in until the next morning. I didn't want to spend any money on lodging, so I decided to wing it the first night in Vegas.

I walked from the airport towards the Strip, and happened through the University of Nevada, Las Vegas. Thinking it would be a decent place to rest, I walked onto the track and laid down on the pole vault mat to get some shut-eye. It was pretty comfortable, a bit chilly but I put on my slacks and suit jacket and kept pretty warm. I was startled by some kids walking the track in the middle of the night who warned me how dangerous this place was, but I assured them I had pepper spray in case anyone tried to bother me. I think I scared them more than they scared me.

The next day the convention began, and I pushed myself to ask lots of questions and speak my mind throughout the event. Although it's called “FreedomFest”, there were a surprising number of statists in attendance: lots of Republicans and big-L Libertarians, but I was encouraged by the number of people who spoke openly about Anarchism. I met some really cool young libertarians and gained a lot of confidence in my ability to share the message of freedom. By the time I got back, I felt like a new person. I realized I had been focused for too long on spreading my ideas online, when the most effective way of communicating an idea is face-to-face.

Upon returning to Austin, I walked five miles home from the airport, filmed myself talking about what I had learned over the past few years, and decided it was the perfect ending to my book.

The End of My Book – *Jul 13, 2015*

Full Circle [10 min video][204]

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[204] http://freeacad.com/2015/08/mf/fin/

Afterword

Since my walk home from the airport, I've continued working on my personal freedom and spreading awareness of the opportunities of Anarchy. A few days after getting back, I attended a Biohack Austin event at Brave New Books where I had the opportunity to talk with John Bush and Catherine Bleish, the awesome new store owners, and Derrick Broze of the Houston Free Thinkers about my experience at FreedomFest and give them the update on life in the woods. The next day Derrick accompanied me out to the forest to film an interview about the Austin Autonomous Zone for the Conscious Resistance Network.

Finding Freedom in the Wilderness w/ Michael Fielding [17 min video][205]

After that, I was blessed with the opportunity to spend three weeks in Michigan thanks to my friend Eric DePan, which forced me to leave my dog walking clients. I was hesitant to give up that income stream at first, but I decided cutting the cord would force me to focus 100% on producing this book. It felt like jumping off the income cliff and trying to build a hang glider before I hit the ground, but after being broke in Puerto Rico I was no longer afraid of poverty.

I had an amazing time up in Michigan and it really cleared my head. I was able to read The Conscious Resistance by John Vibes and Derrick Broze, a very enlightening book that investigates anarchy and spirituality from a number of unique perspectives. Derrick also let me borrow Into the Wild by Jon Krakauer, a fantastic book about Christopher McCandless, a young man who went on a grand adventure to Alaska after graduating from college in pursuit of freedom and simplicity.

I came back to Texas rejuvenated by the experience and ready to create The Sailboat Diaries. Without any job to distract me, I was able to put this book together in just a couple months. Most of it was written by my younger-self anyway. I just needed to add the beginning, the end, a few stories in the middle, and insert all the QR codes. I hope you enjoyed it.

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[205] http://bit.ly/1NIANoX

I have a lot of people to thank. My parents most of all. You set my life in motion on a course towards autonomy. You gave me the tools to become my own man. You gave me the love and support that allowed me to flourish. I could never thank you enough.

I'm eternally grateful to all my friends who helped me put this book together. My publisher, Traci Thiebaud of Whatever, Mom Publications showed me the way last year when she published her own book, Camp Big Stick: Somebody Poisoned the Humans. I had the privilege to see her share her book via coordinated and improvised events as she traveled across the country. Her demonstration and guidance gave me the courage to move forward with The Sailboat Diaries. Thank you for showing me the way.

Benjamin Gilliam, you were my sounding board throughout college. You challenged my ideas and offered me new perspectives. We've gone on numerous adventures together and it's comforting to know you've always got my back. I'm so glad we were roommates at UT. It's been fun to grow with you. Thanks for everything, amigo.

Sean Magin, you were the only one who came out for two long voyages. I couldn't have produced Freedom Propaganda without you, and your help with this book has been immeasurable. I love watching your Life Art and I can't wait to catch up with you in New Zealand.

Daniel Fuqua, you're one of the best friends I've ever had. I'm so glad you came out for the sail. I love dreaming up ideas with you and investigating our beliefs together. I look forward to our future journeys.

Tyler Olsson, my favorite philosopher, I always have so much fun talking with you and I always come away with a new appreciation for language and expression. Thanks for sailing with me, hosting Melissa and me in San Francisco, and demonstrating how education should be.

Jared Reyes, without your help I would have literally sunk Sovereignty on several occasions, and I never would have made it to Little Inagua. You helped make the Austin Temporary Autonomous Zone a reality. I'm grateful for everything and I can't wait to sail together again.

Carlos Rodriguez, I don't know how to thank you enough. I don't know what I would have done if we never met on the bus stop. Your friendship and support are the only reason my Puerto Rican chapters had a happy ending. I had so much fun sailing with you to Culebra, snorkeling around San Juan, and hanging in Dallas. You're one of my best friends for life, thank you for everything, brother.

Marc Ferris, I don't think we would have made it to Key West without you. You're a natural sailor and a great friend, I'm so glad you decided to return for the adventure. Let's go back to the island someday!

Gilliam Family, I don't know how to express my gratitude to you all. You took me in as one of your own, shared hundreds of meals with me, gave me a place to sleep, took me on fishing trips, gave me unending love and support and you always make me feel at home.

My blood brother, Grant Fielding, deserves a heap of gratitude as well. Thanks for coming out on my first extended voyage, visiting me in Miami, and being an awesome person. Keep it up, bro, you're doing great.

Melissa Coronado, you helped me overcome a lot of my fears and made me feel comfortable being myself. You're one of the easiest people in the world for me to talk to, and I'm consistently inspired by your honesty and your courage. I'll always be there for you.

Captain Dave, thanks for being the best neighbor I've ever had. You really were the coolest guy in San Juan. I appreciate all you did for me and I wish you the best.

Jeremy Dickison, I would have never seen the Virgin Islands without your help. Thanks for repairing Sovereignty's engine and keeping me safe in the Caribbean. I'm sorry something as silly as money came between us.

Steph Murphy and Nick Plosko, you guys have been there for me since the beginning of my sailboat days and helped me a ton getting started with the forest life. Thanks for receiving my solar panels, giving me a couch to sleep on, tons of gourmet dinners, a shower and your consistent friendship.

Andrew Byrd, you've been one of my best friends forever, thanks for coming out for the first extended sail, coming to visit in Puerto Rico, and showing me a good time whenever I come to New Orleans.

Eric DePan, thank you for bringing me into the Jenner circle, giving me a couch to sleep on, teaching me how to blow glass, helping me find work, taking me to Michigan, and giving me solid support. I'm lucky to have you as one of my best friends.

Jacquelyn Samperi, I admire your open-mindedness and I always enjoy chatting with you about the future of the freedom movement. You've got a great head on your shoulders, thanks for sharing your thoughts with me.

Sara Royer, I feel like we became super tight friends almost instantly in Michigan. I love the way you share yourself with the world. Thank you so much for hosting my Jenner Book Release!

Andrea Cuestas, you're a better friend than anyone could ask for. I really appreciate you coming out for one of my first overnight anchorages, receiving our satellite phone messages and posting them to Twitter, offering to drive out to Key West to pick me up, and especially giving me a journal for my 24th birthday. I've written in it every day since then, and it proved indispensable in the making of this book.

Victoria Guzman, I miss hanging out on a daily basis in Austin. Thank you so much for your support throughout my journey, your hospitality in Boston, and for sharing your inspirational journey around Europe. I can't wait to follow in your footsteps!

Ashley Cid and Blake Jones, thanks for hosting my first book release at Catacomb. I love the store and I'm honored to have my book on your shelves.

John Bush and Catherine Bleish, the moment I walked into Brave New Books it felt like home. Thanks for all the support and hosting my book signing event. Keep banging on the drum of Liberty!

Derrick Broze, your enthusiasm for freedom is contagious and inspiring. Thanks for sharing your ideas and demonstrating your activism. Thanks a lot for recommending I read Konkin, letting me borrow Into The Wild, interviewing me about my life in the woods, and helping me focus on conscious language.

Cuong Tran, thanks for all your help and advice, your friendship means a lot to me. I hope you're having a great trip across America right now, it was great hanging out in Marathon and hopefully we'll meet up again soon.

Jacob Caicedo, thanks more hanging with me in San Juan, I had a blast. Julian Ferguson, thanks for coming out for sails and buying that spear gun, it made my trip a lot more fun. Margaret Kinkead, I feel so lucky to have met you pressure washing that one day, thank you for everything.

I want to thank everyone who contributed to our sail to Little Inagua: Brian Cartmell, Cuong Tran, Nick Collins, Carol Callon, Sebastian Villarreal, Sterling Blodgett, Chase Hooper, Debbie Elder, Jacob Caicedo, Drew Kangieser, Joey Welch, Nick DiIorio, Mallory Ashwander, Kurt Mosteller, Ian Magin, Amanda Mikeska, Elisa Franco, Marsha Kamish, the Gilliams, and several anonymous donors. Thank you for funding the Founding of the Free Academy.

Uncle Ray, thanks for helping me find my boat, and thank you Aunt Michelle, and Mikayla for coming to my Bon Voyage party. I'd like to thank Mike and Lynn Punch, their grandson Eli, and Lyn Crim for seeing us off as well. Thanks Jackie Miller, Edward Ball and Daniel Perez for coming out on multiple practice sails, Karlsen Bruner for letting us dock in Galveston, Susan Jarrel for showing us around New Orleans, my grandparents for all your love and support, Alice Reyes for a fantastic dinner in Miami, Ketchup (Thomas Samson) for saving our lives in Haiti, Steven Rosario and Javi Ríos for awesome boat trips, dinners and friendship in Puerto Rico, Aziz Khalil for hiring me to do schoolwork when I was broke, Eric and Taj for helping us in Key West, Students for Liberty for granting me a scholarship to attend FreedomFest, thank you Matt Fries for help in the woods, a roof and edits, Kalen Rowe for your edits and helping me with colorful inserts to this book, thanks Kori Aiken for taking a look at Chapter -1 and for demonstrating the courage to move to a new country and create the life you dreamed of, thank you Nikki Gould and Nick DiIorio for hosting me in Denver, thanks Kyle Magin for giving me a place to sleep in Lake Tahoe and taking us on some great excursions, Ryan Champion, thanks for the support... I wish I could keep going forever but I know this list is growing long. Thank you to everyone else that helped me along the way, I'm truly grateful and I feel so lucky to have you all in my life.

I'll leave you all with one last thought, about strategies for organizing:

Freedom Cells and Freedom Hubs – *Sep 8, 2015*

There’s something really cool about medium size groups, something you rarely see in smaller and larger groups; a vibrant mix of openness and direction that enables creativity AND productivity. Groups of too few can’t exploit economies of scale to get things done, and groups of too many suffer from the diffusion of responsibility and conformity bias.

I’ve been thinking a lot about medium size groups since hearing John Bush talk about “Freedom Cells”. Freedom cells are voluntarist mutual aid societies of roughly 8 individuals with similar goals and interests. The members help one another with personal growth while providing a backdrop of support and protection. Here you can listen to John explain the idea of a freedom cell in an interview with Derrick Broze:

[40 min video][206]

Like John points out, different people have articulated different versions of this idea and called it by different names. I'm reminded of Kurt Vonnegut's idea of a 'karass' from Cat's Cradle. A karass is a spontaneously forming group, joined by unpredictable links, that works together as a unit. As Vonnegut describes it, *"a team that does God's Will without ever discovering what they are doing."* Humanity is organized into many such teams. One can try to discover *"the limits of one's karass and the nature of the work God Almighty has had it do … but such investigations are bound to be incomplete."*

"Which brings me to the concept of a wampeter. A wampeter is the pivot of a karass. No karass is without a wampeter, just as no wheel is without a hub. Anything can be a wampeter: a tree, a rock, an animal, an idea, a book, a melody, the Holy Grail. Whatever it is, the members of its karass revolve about it in the majestic chaos of a spiral nebula. The orbits of the members of a karass about their common wampeter are spiritual orbits, naturally. It is souls and not bodies that revolve." But wampeters aren't fixed in stone, "*Wampeters come and wampeters go. At any given time a karass actually has two wampeters – one waxing in importance, one waning."*

I think it might make sense to translate Vonnegut's idea of a wampeter into our language of freedom cells, which is where the phrase "Freedom Hub" comes into play. Just like every karass has a wampeter, every Freedom Cell has a Freedom Hub. For many voluntarists in Austin, Brave New Books plays the role. It's the pivot point of a small community of like-minded folks, a place to gather and share ideas. For artists in Houston, I've found a Freedom Hub at the Jenner House where people are encouraged to share any kind of performance they can imagine. My hope in making these linguistic connections is to share a tool for recognizing existing Freedom Cells and Freedom Hubs, and facilitate their formation by using conscious language.

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[206] http://bit.ly/1KaRW2R

The Free Academy

The Free Academy is a very early work in progress. This page will help you keep up with the movement by providing links to the latest content.

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About the Author

If you made it this far, you already know just about everything there is to know about me. I was born in 1990, grew up in Katy, TX, finished school, bought a boat, sailed to an uninhabited island and founded the Free Academy with some friends. I like to think and converse and explore; I don't like taxes, coercion, or fear.

Like I said back in 2011, “*I don’t believe everything I wrote in the past (am I even the same person as my younger self? We’ll talk about that soon enough), so if you want to know my current stance on something you’ll just have to ask. So post some of your ideas, ask questions or send me links, and let’s start thinking!*”

Your best bet to get in touch with me is via social media or email, although I make no guarantee about a quick reply. Sometimes I take long breaks from electronic communication and sometimes it takes me a while to think about what I want to say, so please don't feel insulted if I take some time to get back to you. My Twitter is @sailboatdiaries. I'm on facebook.com/michael.fielding. My YouTube channel is SailboatDiaries. My email address is mf@freeacad.com. I don't currently have a consistent phone number or mailing address.

If you enjoyed this book, I encourage you to pass it along or let a friend borrow it. If you read this book for free and feel like it was worth something to you, I accept donations via Bitcoin, and fiat. You can donate fiat currency on Paypal by sending money to tigers08@gmail.com (I made my account a long time ago) using the “send money to friends and family” option. I'm both your friend and your family.

You can donate Bitcoins to 1KTkjyoBz2o7Ec9a6KoqT6o3q2D9gkKJwU

Thanks for joining me on this adventure.